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14. ABSTRACT

The present report provides a summary of second year activities for the three-year project. Key accomplishments include Institutional Review Board (and MRMC Oversight approval) for the longitudinal survey study, completion of the interview study data collection, and the approval and completion of the Time 1 assessment of the longitudinal survey study. The data for the Year 1 qualitative studies have been processed and coded, and summaries of the key findings form the two qualitative studies have been provided to the 3rd Infantry Division. In addition, a chapter supported by the grant has been published, a review article supported by the grant has been published in *Clinical Psychology Review*, and four posters showcasing the grant results were presented at the American Psychological Association. Key activities for the first quarter of the third year of the project will be finishing analysis of the Time 1 survey data, coordinating the administration of the Time 2 survey, and writing manuscripts based on the qualitative data from Year 1.

15. SUBJECT
Mental Health Treatment, Military, Stigma, Barriers, Negative Attitues

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INTRODUCTION

The studies being supported under the grant titled "Facilitating Soldier Receipt of Mental Health Treatment" are all designed to provide a better understanding of those factors that facilitate and hinder Soldiers from getting treatment for mental health problems caused by exposure to traumatic events during combat. Two qualitative studies were proposed for Year 1 of the grant. The first qualitative study involved focus groups with Soldiers of different ranks to get the Soldier's perspective on those factors that determined whether fellow Soldiers would get treatment for a mental health problem. The focus group study was designed to include Soldiers who may or may not have actually sought treatment, and therefore would provide a representative assessment of how Soldiers in general view the facilitators and impediments toward treatment seeking. The second qualitative study involved Soldiers who have sought treatment for a mental health problem while on active duty. The primary goal of this study was to provide insight into what causes Soldiers to overcome the barriers to treatment seeking that may exist and actually get treatment. The results of these two qualitative studies will be written up for presentation and publication, and will also provide information for the studies being proposed in Year 2 and Year 3 of the grant. In Year 2 a longitudinal study will be conducted with a Brigade Combat Team (BCT) from the 3rd Infantry Division. This study will include the most comprehensive assessment of facilitators and inhibitors of treatment seeking of any study conducted on treatment seeking in the military, and will also include a detailed assessment of actual treatment seeking (e.g. the type of treatment received, number of sessions attended). The results from the Year 2 study, along with the two qualitative Year 1 studies, will be used to design an intervention in Year 3 that will be geared towards changing the attitudes of Soldiers towards seeking needed mental health treatment. This intervention will be pilot-tested in Year 3, which will involve an examination of whether Soldiers who receive the intervention report more positive attitudes toward seeking needed mental health treatment than Soldiers who receive a control intervention of stress management training.

BODY

In this section of the report the major tasks from the approved Statement of Work (SOW) are presented, followed by an assessment of whether the task was accomplished, and a summary (where applicable) of data/results relevant to the task. If a given task has not been completed, a plan is offered for addressing any objectives not achieved.

Statement of Work Objectives for Year 2

1. Brief military leaders on the longitudinal study, which will be used to determine the strongest predictors of attitudes toward seeking treatment and ultimately mental health utilization. Work with leaders to identify a Brigade Combat Team (BCT) to participate in the study. The current plan is for this BCT to come from Fort Stewart, Georgia.

The principal investigator made multiple trips to Fort Stewart, Georgia, in order to secure the support of the 3rd Infantry Division for the longitudinal study. The PI coordinated with the behavioral health officer of the 4th Brigade of the 3rd ID to secure support of the Brigade for the project. The operations officer of the 4th Brigade approved the longitudinal study in July of 2011.

2. Finalize Time 1 assessment tool based upon the interview and focus group studies.

The survey for the longitudinal study was finalized after multiple iterations, involving both theoretical and practical considerations. The final survey (first document in Appendix) was created so that survey responses could be scanned and processed in an expeditious manner.

3. Submit the longitudinal study for exempt review to the Institutional Review Board at Clemson University. Upon approval submit to the Office of Research Protection at Fort Dietrick, MD.

The protocol for the longitudinal study was determined to fall under expedited review. The expedited protocol for the study was submitted and approved by the Clemson University Institutional Review Board, and was also approved by the Office of Research Protection at the US Army Medical Research and Material Command.

4. Schedule and conduct Time 1 assessment based upon the operational schedules of participating units.

The PI worked with representatives from the 4th Brigade to develop a FRAGO for the survey administration to 2,500 soldiers. The Clemson team of four investigators and two graduate students traveled to Fort Stewart to conduct the assessment from August 13-17, 2012. The assessment was conducted in six hour-long sessions each day, with given units providing soldiers for participation during given time slots. Although we fell short of our 2,500 target, we were able to assess 1,911 soldiers, 1,728 of which provided consent for their responses to be used for research purposes.

5. Deliver briefings based on Time 1 assessment results to unit leaders

The surveys have been processed and put through quality control procedures, and the PI for the grant has requested a meeting with the 3rd ID surgeon and 4th Brigade operations officer for a briefing.

6. Schedule and conduct Time 2 assessment based upon the operational schedules of participating units.

The time 2 assessment has been set for January 14-17, 2013.

7. Deliver briefings based on Time 2 assessment and the Time 1-Time 2 matched assessment to unit leaders.

These briefings will be delivered as soon as the Time 2 data are collected, processed, and put through quality control procedures.

8. Beginning to plan the intervention for Year 3

Although technically not a Year 2 task in the SOW, our team has been active in assembling materials for use in the intervention we are scheduled to develop in Year 3 of the grant. We have developed an outline of the intervention based upon what was learned from the qualitative studies, and have also collaborated with other investigators who are working on similar interventions.

KEY RESEARCH ACCOMPLISHMENTS AND REPORTABLE OUTCOMES

- Completed coding of the focus group responses, identifying the top barriers to treatment seeking reported by soldiers, the top facilitators of treatment seeking, and recommendations for increasing the number of soldiers who get needed mental health treatment. The results from the focus groups were presented at the annual meeting of the American Psychological Association (APA). The results of the focus group study were also used in the construction of the survey for the longitudinal study.

- Conducted 32 interviews with Soldiers who have sought mental health treatment for mental health problems while on active duty. As indicated in our quarterly report, although this number fell short of our 40 interview goal, we had reached a point in data collection where the Soldiers interviewed were not providing new information to the questions, thereby leading us to conclude that information saturation had occurred. These interviews were transcribed and coded, and summaries of the barriers and facilitators of treatment seeking were prepared. The results from the focus groups were also presented at the annual meeting of the American Psychological Association (APA).

- Assessed 1,911 soldiers regarding their perceptions of behavioral health utilization and receipt of care. This effort represents the most comprehensive assessment of the determinants of mental health treatment seeking to date, and completing the longitudinal component of the assessment will strengthen the conclusions drawn from the project.

- In total, four posters were presented at the 2012 meeting of APA based upon the results of the two qualitative studies, with three of the four posters combining the results of both studies. The citations for the posters are provided in the reference section. One of the posters focused on how leader behaviors can both facilitate and hinder treatment seeking by military personnel. One poster focused on the role of psychological courage in soldiers getting mental health treatment. The third poster focused on summarizing the barriers, facilitators, and perceptions of mental health professionals identified in the two qualitative studies, and the final poster summarized recommendations soldiers had for improving receipt of mental health treatment.

- A book chapter was written addressing the factors that determine whether employees in high stress occupations seek needed mental health treatment. This chapter has now been published, and is included as the second document in the Appendix (see reference for the chapter in the reference section of the report).

- A review article was written addressing adaptations to mental health treatment that have been hypothesized to reduce barriers to care, as well as interventions that have been developed to reduce barriers. The article was recently published in Clinical Psychology Review, a high impact journal. The article is included as the third document in the Appendix (see reference for the chapter at the end of the report).

CONCLUSION

The present report documents the progress made on the Year 2 objectives of the grant, including the two qualitative studies that were completed, and the progress that was made on the longitudinal study proposed in Year 2 of the grant. Although data collection for the Time 2 assessment of the longitudinal study is not complete, were able to complete the Time 1 assessment, and have the Time 2 assessment scheduled for Jan. 14-17, 2013. In the next two months we anticipate completing the key analyses of the Time 1 survey results, and preparing for the administration of the Time 2 assessment. Presentations and manuscripts will be developed based on the results of the studies, and the results will be used to plan the intervention being tested in Year 3 of the grant.

REFERENCES

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Britt, T.W. (2012, November). Chair of symposium titled *Barriers and facilitators of behavioral health care utilization in a military context: Implications for interventions*. To be presented at the annual meeting of the International Society for the Study of Traumatic Stress, Los Angeles, CA.

Zinzow, H., Britt, T.W. Pury, C.L.S., & Raymond, M.A. Gillespie, S. (2012, August). Connecting military personnel to mental health treatment: Barriers, facilitators, and intervention recommendations. Paper in above symposium.

Behavioral Health Perceptions and Utilization

Show your answers by filling in the bubble like this:

Answer Selection: Correct = ●   Incorrect = ⊗ ☑ ⊖

I received an information sheet and I agree to allow my survey responses to be used for research purposes.

- O Yes
- O No

1. To compare your responses over time, we need to generate a unique code that you will remember but that also protects your identity. We will create this code by converting State or Territory information that you provide into a number and then adding it to your last five Social Security Number digits to create a unique code. Only this code will remain in our database. While this strategy cannot guarantee your anonymity, it would be extremely difficult for someone to use this code to personally identify you. To do this, we need you to:
   a) Write down and bubble in only the LAST FIVE digits of your Social Security Number.
   b) Then, bubble in the State or Territory where you were on 9/11/2001 (the day of the terrorist attacks).

a) Fill in and bubble in the **last five digits** of your social security number.

b) <u>Bubble in the **state or territory** where you were on 9/11/2001.</u>

O	Alabama	O	New Hampshire
O	Alaska	O	New Jersey
O	Arizona	O	New Mexico
O	Arkansas	O	New York
O	California	O	North Carolina
O	Colorado	O	North Dakota
O	Connecticut	O	Ohio
O	Delaware	O	Oklahoma
O	Florida	O	Oregon
O	Georgia	O	Pennsylvania
O	Guam	O	Puerto Rico
O	Hawaii	O	Rhode Island
O	Idaho	O	South Carolina
O	Illinois	O	South Dakota
O	Indiana	O	Tennessee
O	Iowa	O	Texas
O	Kansas	O	Utah
O	Kentucky	O	Vermont
O	Louisiana	O	Virginia
O	Maine	O	Washington
O	Maryland	O	Washington, DC
O	Massachusetts	O	West Virginia
O	Michigan	O	Wisconsin
O	Minnesota	O	Wyoming
O	Mississippi		
O	Missouri	O	Europe
O	Montana	O	Asia/Pacific Rim
O	Nebraska	O	**Other location**
O	Nevada	O	**Don't remember**

1

I. Perceptions of Behavioral Health

1. The following questions refer to your views of getting mental health treatment (e.g. counseling, medication) were you to develop a stress or emotional problem, as well as your views of mental health professionals (e.g. psychologists, social workers, psychiatrists). **Using the scale provided, <u>rate your extent of agreement with the following statements:</u>**

	Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree
Getting mental health treatment would be embarrassing.	O	O	O	O	O
Getting mental health treatment would hurt my chances of getting promoted.	O	O	O	O	O
Getting mental health treatment would lead to me getting discharged.	O	O	O	O	O
Getting mental health treatment would hurt my security clearance.	O	O	O	O	O
Members of my unit might have less confidence in me if I received mental health treatment.	O	O	O	O	O
My unit leadership might treat me differently if I received mental health treatment.	O	O	O	O	O
Fellow unit members would treat me differently if I received mental health treatment.	O	O	O	O	O
I would be seen as weak if I received mental health treatment.	O	O	O	O	O
My fellow unit members would think I was just trying to get out of work if I received mental health treatment.	O	O	O	O	O
My visit would not remain confidential within my unit if I were to receive mental health treatment.	O	O	O	O	O
Friends and family would encourage me to go get mental health treatment if I needed it.	O	O	O	O	O
My leaders would encourage me to go get treatment if I needed it.	O	O	O	O	O
My fellow unit members would encourage me to go get treatment if I needed it.	O	O	O	O	O
I have seen mental health care work for others.	O	O	O	O	O
I would seek treatment as a way to take care of myself if I needed to.	O	O	O	O	O
Soldiers would be more likely to get mental health treatment if they could go outside of working hours.	O	O	O	O	O
It would be easier to get mental health treatment if I could skip my chain of command.	O	O	O	O	O
I do not know where to go to get mental health treatment.	O	O	O	O	O
I would have to wait too long to get an initial appointment with a mental health provider.	O	O	O	O	O

	Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree
It would be difficult to get time off from work for mental health treatment.	O	O	O	O	O
My workload does not allow time for mental health treatment.	O	O	O	O	O
Leaders do not adequately communicate how to go about getting treatment.	O	O	O	O	O
Leaders are too busy with high OPTEMPO to recognize mental health problems among Soldiers.	O	O	O	O	O
I don't trust mental health professionals.	O	O	O	O	O
Mental health professionals don't understand the military environment and experiences.	O	O	O	O	O
Mental health professionals are generally competent to treat psychological problems.	O	O	O	O	O
If I were experiencing a mental health problem at this point in my life, I could find relief in talking with a mental health professional.	O	O	O	O	O
I am familiar with the mental health professionals who could provide treatment if I needed it.	O	O	O	O	O
Mental health providers are too burned out to offer effective treatment.	O	O	O	O	O
I would rather see a chaplain than a mental health professional for a stress or emotional problem.	O	O	O	O	O
I would prefer to deal with mental health problems by making an appointment with my primary care doctor, as opposed to seeking mental health treatment.	O	O	O	O	O
I do not know what happens during mental health treatment.	O	O	O	O	O
I would feel too guilty about burdening my unit members with my responsibilities to seek treatment.	O	O	O	O	O
Getting mental health treatment for a psychological problem should be a last resort.	O	O	O	O	O
I would be more likely to seek mental health treatment if it were offered in a medical care facility, as opposed to a behavioral health clinic.	O	O	O	O	O
Mental health treatment would not treat my main problems.	O	O	O	O	O
Mental health treatments work.	O	O	O	O	O
Mental health treatment is only for severe problems.	O	O	O	O	O
I would get mental health treatment if I were worried or upset for a long period of time.	O	O	O	O	O

	Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree
The idea of talking about my problems during therapy makes me uncomfortable.	O	O	O	O	O
If I received mental health treatment, I'd have to think about a lot of issues I'd rather just ignore.	O	O	O	O	O
Mental health professionals are just going to tell me things I already know about myself.	O	O	O	O	O
If someone has a mental health problem, seeking treatment is a sign of strength.	O	O	O	O	O
If someone has a mental health problem, treatment can improve their relationships.	O	O	O	O	O
If someone has a mental health problem, treatment can improve their work performance.	O	O	O	O	O
It's OK to get mental health treatment if you need it.	O	O	O	O	O
The medications prescribed by mental health providers are usually addictive.	O	O	O	O	O
If I were to receive mental health treatment, I might be prescribed medicine that would interfere with my ability to do my job.	O	O	O	O	O
I would not want to take medication for mental health problems because I don't know how it would affect me.	O	O	O	O	O
Mental health providers are more likely to prescribe medication than to provide counseling.	O	O	O	O	O
Medications are not a good way to treat a mental health problem.	O	O	O	O	O
I would be able to recognize if someone else had a psychological problem in need of treatment.	O	O	O	O	O
I prefer to handle problems myself as opposed to seek mental health treatment.	O	O	O	O	O
I deal with problems by talking with friends and family as opposed to seeking mental health treatment.	O	O	O	O	O
Strong people can get over psychological problems by themselves.	O	O	O	O	O
Psychological problems tend to work themselves out without help.	O	O	O	O	O
Mental health problems are a normal reaction to combat.	O	O	O	O	O
I believe seeking treatment for mental health problems is a sign of personal failure.	O	O	O	O	O
I would have less confidence in a unit member who had received mental health treatment.	O	O	O	O	O

	Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree
I would not trust a soldier to have my back if I knew he/she were receiving mental health treatment.	O	O	O	O	O
I would be concerned about the operational readiness of a unit member who was getting treatment for a mental health problem.	O	O	O	O	O
Soldiers who seek mental health treatment are trying to get out of work.	O	O	O	O	O
Soldiers get mental health treatment because they cannot handle military life.	O	O	O	O	O
Soldiers who get mental health treatment had problems before they joined the Army.	O	O	O	O	O

1	2	3	4	5	6	7
Very Negative			Neutral			Very Positive

	1	2	3	4	5	6	7
2. Overall, what is your current attitude toward seeking treatment from a mental health professional (e.g. psychiatrist, psychologist, social worker) were you to develop a problem?	O	O	O	O	O	O	O

3. Do you know someone who has sought mental health treatment? O Yes   O No

3a. If yes, please indicate your relationship to that individual (mark all that apply)
O Another soldier
O A friend or relative

4. **With regard to your unit**, tell us how much you disagree or agree with each statement using the scale provided:	Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree
Soldiers are discouraged from using mental health services.	O	O	O	O	O
Soldiers would think less of a team leader who was receiving mental health counseling.	O	O	O	O	O
Soldiers would support unit members who want to seek mental health counseling.	O	O	O	O	O
Soldiers would help members get mental health counseling if they needed it.	O	O	O	O	O
Leaders act decisively when a concern of a Soldier's psychological status is raised.	O	O	O	O	O
Leaders show support for stress prevention through involvement and commitment.	O	O	O	O	O
Leaders clearly consider the psychological health of Soldiers to be of great importance.	O	O	O	O	O
Leaders consider Soldier psychological health to be as important as mission success.	O	O	O	O	O
There is good communication about psychological safety issues which affect me.	O	O	O	O	O

	Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree
Soldiers are encouraged to become involved in psychological safety and health issues.	O	O	O	O	O
My contributions to resolving mental health and safety concerns are listened to.	O	O	O	O	O

II. Combat and Traumatic Experiences

1. The next questions are about stressful experiences. Think of all your deployments in answering the questions. How many times did you ever have each of these experiences during **any of your deployments?**

	Never	One time	Two to four times	Five to nine times	Ten or more times	Did this happen during your most recent deployment?	
						Yes	No
Being attacked or ambushed	O	O	O	O	O	O	O
Receiving incoming artillery, rocket, or mortar fire	O	O	O	O	O	O	O
Being shot at or receiving small arms fire	O	O	O	O	O	O	O
Shooting or directing fire at the enemy	O	O	O	O	O	O	O
Being responsible for the death of an enemy combatant	O	O	O	O	O	O	O
Being responsible for the death of a noncombatant	O	O	O	O	O	O	O
Seeing dead bodies or human remains	O	O	O	O	O	O	O
Seeing dead or seriously injured Americans	O	O	O	O	O	O	O
Knowing someone seriously injured or killed	O	O	O	O	O	O	O
Improvised explosive device (IED) /booby trap exploded near you	O	O	O	O	O	O	O
Being physically moved or knocked over from an explosion	O	O	O	O	O	O	O
Being in threatening situations where you were unable to respond because of the rules of engagement.	O	O	O	O	O	O	O
Saved the life of a Soldier or civilian	O	O	O	O	O	O	O
Participating in demining operations	O	O	O	O	O	O	O
Seeing ill/injured women or children who you were unable to help	O	O	O	O	O	O	O
Being wounded or injured	O	O	O	O	O	O	O
Had a close call, was shot or hit, but protective gear saved you	O	O	O	O	O	O	O
Had a buddy shot or hit who was near you	O	O	O	O	O	O	O
Clearing or searching homes or buildings.	O	O	O	O	O	O	O
Engaging in hand-to-hand combat	O	O	O	O	O	O	O

2. During the most recent deployment, how often were you in serious danger of being injured or killed?	O Never
	O Once or twice
	O Sometimes
	O Many times

3. Listed below are a number of stressful things that sometimes happen to people. For each event, indicate whether it happened to you personally at any point in your entire life.

	Yes	No
Sexual assault (rape, attempted rape, made to perform any type of sexual act through force or threat of harm)	O	O
Unwanted sexual contact while you were passed out from drug or alcohol use, or too drunk or high to know what you were doing or control your behavior	O	O
Other unwanted sexual experience	O	O

4. If you experienced any of the above events in question 3, please answer the following:

a. How many of these events (counting repeated incidents) did you experience prior to entering the military?

  O   0 to 4   O   5 to 10   O   11 to 15   O   Over 15

b. How many of these events (counting repeated incidents) did you experience after entering the military?

  O   0 to 4   O   5 to 10   O   11 to 15   O   Over 15

c. How old were you when you experienced the most recent event? _____

III. Health & Well-Being

1. Below is a list of reactions that soldiers sometimes experience following deployment or in response to other stressful life experiences. **Please mark how much you have been bothered by each problem in the past month.**

	Not at all	A little bit	Moderately	Quite a bit	Extremely
Repeated, disturbing memories, thoughts, or images of the stressful experience	O	O	O	O	O
Repeated, disturbing dreams of the stressful experience	O	O	O	O	O
Suddenly acting or feeling as if the stressful experience were happening again (as if you were re-living it)	O	O	O	O	O
Feeling very upset when something reminded you of the stressful experience	O	O	O	O	O
Having physical reactions (like heart pounding, trouble breathing, sweating) when something reminded you of the stressful experience	O	O	O	O	O
Avoiding thinking about or talking about the stressful experience or avoiding having feelings related to it	O	O	O	O	O
Avoiding activities or situations because they reminded you of the stressful experience	O	O	O	O	O
Trouble remembering important parts of the stressful experience	O	O	O	O	O
Loss of interest in activities that you used to enjoy	O	O	O	O	O
Feeling distant or cut-off from other people	O	O	O	O	O

	Not at all	A little bit	Moderately	Quite a bit	Extremely
Feeling emotionally numb or being unable to have loving feelings for those close to you	O	O	O	O	O
Feeling as if your future somehow will be cut short	O	O	O	O	O
Trouble falling or staying asleep	O	O	O	O	O
Feeling irritable or having angry outbursts	O	O	O	O	O
Having difficulty concentrating	O	O	O	O	O
Being "super alert" or watchful or on-guard	O	O	O	O	O
Feeling jumpy or easily startled	O	O	O	O	O

2. Over the **LAST 2 WEEKS**, how often have you been bothered by any of the following problems?	Not at all	Few or several days	More than half the days	Nearly everyday
Little interest or pleasure in doing things.	O	O	O	O
Feeling down, depressed, or hopeless.	O	O	O	O
Trouble falling or staying asleep, or sleeping too much.	O	O	O	O
Feeling tired or having little energy.	O	O	O	O
Poor appetite or overeating.	O	O	O	O
Feeling bad about yourself-or that you are a failure or have let yourself or your family down.	O	O	O	O
Trouble concentrating on things such as reading the newspaper or watching television.	O	O	O	O
Moving or speaking so slowly that other people could have noticed? Or the opposite –being so fidgety or restless that you have been moving around a lot more than usual.	O	O	O	O
Thought you would be better off dead or of hurting yourself in some way.	O	O	O	O

	Not difficult at all	Somewhat difficult	Very difficult	Extremely difficult
3. If you checked ANY of the above problems in questions 1-9, how DIFFICULT have these problems made it for you to do your work, take care of things at home, or get along with other people?	O	O	O	O

	Yes	No
4. In the past 4 weeks, have you used alcohol?	O	O
If "Yes", in the past 4 weeks…		
Have you felt you wanted or needed to cut down on your drinking?	O	O
Have you used alcohol more than you meant to?	O	O
Did you drive after having several drinks?	O	O
Did you ride with a driver who had too much to drink?	O	O
Have you been late or missed work because you were drinking or hung over?	O	O

5. During the **PAST FOUR WEEKS**, to what extent have **STRESS OR EMOTIONAL PROBLEMS**:	Not at all	A little	Somewhat	A lot	Extremely
Limited your ability to do your primary military job	O	O	O	O	O
Disrupted your social life	O	O	O	O	O
Disrupted your family life/home responsibilities	O	O	O	O	O

6. For each statement listed below, please pick the one number that best indicates **how true the particular statement is for you**. There are no right or wrong answers. Please be as honest as you can.

	1	2	3	4	5	6	7
	Strongly disagree						Strongly Agree
I can make myself feel good by imagining what a happy time that is about to happen will be like.	O	O	O	O	O	O	O
It's hard for me to get very excited about fun times before they actually take place.	O	O	O	O	O	O	O
It's easy for me to enjoy myself when I want to.	O	O	O	O	O	O	O
I don't enjoy things as much as I should.	O	O	O	O	O	O	O
It's easy for me to rekindle the joy from pleasant memories.	O	O	O	O	O	O	O
When I reminisce about pleasant memories, I often start to feel sad or disappointed.	O	O	O	O	O	O	O
My life has a clear sense of purpose.	O	O	O	O	O	O	O
I have a good sense of what makes my life meaningful.	O	O	O	O	O	O	O
My life has no clear purpose.	O	O	O	O	O	O	O

IV. Behavioral Health Issues

1. Are you currently experiencing a stress, emotional, alcohol, or family problem? If no, skip to question 2.

O No
O Yes

	1	2	3	4	5	6	7
	Not at all severe			Moderately severe			Very severe
1a. Please rate the severity of your problem.	O	O	O	O	O	O	O

1b. How long have you had this problem (in months)?

O < 1 month
O 1 - 2 months
O 3 - 5 months
O 6 - 11 months
O 12 months or longer

1c. How long did it take for you to recognize that you had a problem?

O 0-2 months
O 3-5 months
O 6-11 months
O 12 months or longer

1d. Have you considered getting treatment for the problem?
O No   O Yes, I am considering treatment   O Yes, I am receiving treatment

1e. If you answered "no" or "Yes, I am considering _____
treatment", why have you not sought treatment?

2. In **THE PAST 12 MONTHS** have you communicated with any of the following people about a stress, emotional, alcohol, or family problem you were experiencing?	Yes	No
A romantic partner.	O	O
A friend or other family member.	O	O
A member of your unit.	O	O
A unit leader.	O	O
A spiritual leader or chaplain.	O	O

3. In **THE PAST 12 MONTHS**, did you do any of the following regarding a stress, emotional, alcohol, or family problem you were experiencing:	Yes	No
Looked for online resources about the problem.	O	O
Called a hotline to discuss the problem.	O	O
Read self-help books about the problem.	O	O

4. In the **PAST 12 MONTHS**, did you receive mental health services for a stress, emotional, alcohol, or family problem from any of the following professionals? **(MARK ALL THAT APPLY):**	Yes	No
Mental health professional (such as a psychologist or social worker) at the Behavioral Health Clinic (Bld. 816)	O	O
Mental health professional at the 703rd Aid Station	O	O
Mental health professional at the North Troop Medical Clinic (TMC)	O	O
Mental health professional at another military facility (Location: _____)	O	O
Mental health professional at a civilian facility	O	O
Primary care/general medical doctor at a military facility	O	O
Primary care/general medical doctor at a civilian facility	O	O
Chaplain or spiritual advisor	O	O
Received treatment from another source	O	O

  If yes, please describe: _____

5. In the PAST 12 MONTHS, how many visits for mental health services did you attend?
O 0   O 1-2   O 3-7   O 8-12   O More than 12

6. In the **PAST 12 MONTHS** have you received any of the following treatments? Check all that apply.	Yes	No
Individual Therapy or Counseling	O	O
Assessment testing session for a mental health problem	O	O
Medication for a mental health problem	O	O
Group Therapy	O	O
Marital or Family Therapy	O	O
Alcohol or Substance Abuse Treatment	O	O
Inpatient psychiatric hospitalization	O	O
Telehealth (i.e. treatment over a video connection in a medical facility)	O	O
Internet-based Therapy (i.e., discussions with a therapist over the internet)	O	O

	Yes	No
Alternative or holistic medicine	O	O
Vocational rehabilitation	O	O
Don't know	O	O
Other	O	O

If other, please specify: _____

7. If you received treatment for a stress, emotional, family, or alcohol problem in the **PAST 12 MONTHS**, please answer the following questions. If you have not received treatment, please skip to question 8.

a. Please indicate the extent to which each of these influenced you to seek treatment:	Not at all	A little bit	Moderately	Quite a bit	Very much
My leaders allowed me time off work to attend treatment.	O	O	O	O	O
My leaders gave me information on where to go for treatment.	O	O	O	O	O
My leaders were supportive of seeking treatment.	O	O	O	O	O
My spouse/family encouraged me.	O	O	O	O	O
A fellow soldier or friend encouraged me.	O	O	O	O	O
I believed that seeking treatment was a way to take care of myself.	O	O	O	O	O
I believed that seeking treatment would be helpful.	O	O	O	O	O
My problems were interfering with my life.	O	O	O	O	O
My schedule was flexible enough for me to attend treatment.	O	O	O	O	O
I knew where to go for treatment.	O	O	O	O	O
I was command-referred (ordered to get treatment).	O	O	O	O	O

b. Once you recognized that you needed treatment or were referred for treatment, how long did it take for you to receive treatment?

- O 0-2 months
- O 3-5 months
- O 6-12 months
- O Over 12 months

c. Did you start receiving mental health treatment in the PAST 12 MONTHS, but stopped or dropped out before completing the treatment?

- O No (skip to question 8)
- O Yes (complete next question)

d. If yes, what were your reasons for dropping out?

_____

_____

_____

8. Have you ever been referred for mental health treatment by a medical provider (e.g. primary care provider or mental health professional) or chaplain?

- O Yes
- O No

8a. If yes, did you follow through with your referral?

- O Yes
- O No

If no, please indicate your reason for not following through:

_____

_____

_____

V. Deployment History

1. How many total months have you been deployed in the past three years? Please write in your answer: _____ and fill in the appropriate circles. (For example, if the answer is 9 months, then mark "09".)

O	0	O	0
O	1	O	1
O	2	O	2
O	3	O	3
		O	4
		O	5
		O	6
		O	7
		O	8
		O	9

2. Where was your most recent combat or peacekeeping deployment?

- O Iraq
- O Afghanistan
- O SW Asia (other than Iraq/Afghanistan)
- O Other location
- O NA (never deployed)

If "other location", please specify location: _____

3. Using the scale provided, how many times in your career have you deployed to any of the following:	Never	One time	Two times	Three or more times
Iraq (OIF)	O	O	O	O
Afghanistan (OEF)	O	O	O	O
Kuwait or Qatar (OIF)	O	O	O	O
Other (Please indicate): _____	O	O	O	O

4. For your most recent deployment, please indicate the Month/Year **you returned home**	Month		Year	
	O	JAN	O	Prior to 2005
	O	FEB	O	2006
	O	MAR	O	2007
	O	APR	O	2008
	O	MAY	O	2009
	O	JUN	O	2010
	O	JUL	O	2011
	O	AUG	O	2012
	O	SEP		
	O	OCT		
	O	NOV		
	O	DEC		

5. How long were you deployed on your most recent deployment (in months)? _____

VI. Demographics

Age	O 18 – 19	O 20 – 24	O 25 – 29	O 30 – 39	O 40 or older

Gender	O Male	O Female

Race/Ethnicity	O Caucasian/White	O African American	O Hispanic
	O Asian/ Pacific Islander	O Other (please specify) _____	

Highest Level of Civilian Education

O Some high school	O GED	O High school diploma	O Some college
O Associate's degree	O Bachelor's degree	O Master's degree	O Doctorate degree

Grade/Rank	O E1-E4	O E5-E6	O E7-E9	O O1-O3	O O4-O9	O WO1-WO5

What is your current unit?	How many years have you been in the military? If less than one year, please mark "00".

Brigade _____
 Battalion _____
 Company/Battery _____
 Other, specify: _____
	O 0 O 0
	 O 1 O 1
	 O 2 O 2
	 O 3 O 3
	       O 4
	       O 5
	       O 6
	       O 7
	       O 8
	       O 9

4

Understanding Mental Health Treatment-Seeking in High Stress Occupations

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Employees in many organizations are faced with high levels of stress that have the potential to create mental health problems. Prototypical examples of high stress occupations include military personnel deployed in support of combat operations, intelligence analysts engaged in deep undercover operations, first responders following different types of emergencies, and firefighters and police officers. In addition, employees in many additional occupations are exposed to chronic organizational stressors that have been repeatedly linked to psychological and physical symptoms (Barling, Kelloway & Frone, 2005; Cooper, Dewe & O'Driscoll, 2001).

Although it is well recognized that adverse work conditions have the potential to create mental health problems, surprisingly little research has investigated the determinants of whether employees seek mental health treatment for these problems. Literature on employee assistance programs (EAPs) describes the availability of mental health services for employees, but a gap exists in understanding the factors involved in whether employees use these resources (see Cooper, Dewe & O'Driscoll, 2011). Furthermore, an underlying assumption of EAPs is that it is the employee's responsibility to take advantage of the different programs, and the use of these programs reflects a tertiary level of prevention that affects the relatively few employees who fail to cope with occupational demands.

In the present chapter we review research on mental health problems in high stress occupations, whether employees seek treatment for these problems, and the factors associated with the decision to seek treatment. Our interest in this chapter is on what determines whether employees seek mental health treatment for problems caused by highly stressful work, rather than treatment for problems not work-related or present prior to employment. We discuss both the individual determinants of

treatment-seeking, as well as those aspects of organizational culture, leadership, and unit climate that are likely to influence an employee's decision to seek mental health treatment. After presenting the available research, we make the argument that the expeditious receipt of mental health treatment by employees in high stress occupations is the responsibility of the organization and leaders within the organization. We conclude the chapter with a discussion of the need to normalize the receipt of mental health treatment in high stress occupations, emphasize the receipt of mental health treatment as an effective mechanism to prevent more severe problems from occurring, and repackage mental health treatment so it is more sensitive to the organizational culture of high stress occupations.

Mental Health Problems in High Stress Occupations

One high stress occupation where the documentation of mental health problems has become a priority is in the US military. Given the prevalence of different mental health problems following Operation Desert Storm, the US military began a comprehensive screening program following operational deployments to assess the mental health impact of military operations. Given the traumatic stressors encountered during combat, it is not surprising that up to 30% of military personnel returning from combat in Afghanistan and Iraq report suffering from psychiatric problems (Hoge, Auchterlonie & Milliken, 2006; Hoge et al., 2004). Numerous sources also report an increase in suicide rates. Senior defense officials told the Associated Press (P. Jelinek, January 30, 2009) that soldier suicide was at the highest rate in three decades. Officials reported that at least 128 soldiers had taken their own lives in 2008, an increase from the 115 suicides in 2007 and 102 suicides in 2006.

Furthermore, research has identified objective features of combat operations that are predictive of the incidence of mental health problems. Military personnel are more likely to develop mental health problems if they are exposed to higher levels of combat (Hoge et al., 2004), deploy for longer periods of time (Adler, Huffman, Bliese & Castro, 2005), or participate in multiple deployments (Castro & Adler, 2011). Castro and Adler (2011) reported that the incidence of some form of mental health problem (i.e., post-traumatic stress disorder, depression, alcohol abuse) was 40% for those military personnel who spent more than 40 hours per week outside their base camp. These individuals are the most likely to experience high levels of combat exposure, and this finding further links the incidence of mental health problems to the experience of severe occupational hazards.

In addition to the military, employees in other high stress occupations also experience mental health problems as a result of exposure to stressors. Employees involved in responding to emergencies (e.g., paramedics, firefighters) frequently encounter highly stressful demands at work, with over 80% reporting a critical incident involving natural or man-made disasters (Beaton & Murphy, 1995). Exposure to these stressful events often results in mental health problems (Phelps, Lloyd, Creamer & Forbes, 2009). In a UK sample of emergency ambulance workers,

22% reported symptoms consistent with a diagnosis of post-traumatic stress disorder (PTSD) (Bennet *et al.*, 2004). Del Ben, Scotti, Chen and Fortson (2006) reported a PTSD rate of 8% among firefighters, and identified a number of predictors of PTSD symptoms in this high-stress occupation. McFarlane (1998) also found that 15% of firefighters in Australia who experienced the critical incident of a deadly bushfire showed symptoms of PTSD.

Rothberg and Wright (1999) also detailed the significant stressors facing police officers (e.g., exposure to violence, injury, and death), and noted how exposure to these stressors can create mental health problems. A study of US suburban police officers revealed that 13% met diagnostic criteria for PTSD (Robinson, Sigman & Wilson, 1997). As another example, researchers found that first responders reported mental health problems related to burnout and "compassion fatigue" when assisting victims of, for example, the 2001 terrorist attacks in New York City (Alexander & Atcheson, 1998; Boscarino, Figley & Adams, 2004). Interestingly, those in the media who report on potentially traumatic episodes also report symptoms of mental health problems. Among war correspondents, Feinstein, Owen and Blair (2002) found a lifetime prevalence rate of 28.6% for PTSD, 21.4% for depression, and 14.3% for substance abuse. These rates were considerably higher than a comparison group of journalists who had not reported on wartime events.

This brief review reveals that employees may experience different mental health problems (e.g., PTSD, depression, alcohol problems, burnout) from stressors encountered on the job, and that the magnitude of stressors encountered in a given occupation is predictive of mental health problems experienced by employees. Given the latter association, we argue that highly stressful events at work should be considered occupational hazards that place employees at risk for the development of mental health problems, just as environmental hazards (e.g., loud noise, toxic fumes) place employees at risk for physical problems. In most cases employees will readily get medical treatment for physical injuries, but the decision to seek treatment for mental health problems is more uncertain.

Do Employees Seek Treatment for Mental Health Problems?

In addressing whether employees seek treatment for mental health problems, it is first important to emphasize that the early receipt of mental health treatment is seen as an effective way of preventing more severe problems in the future (Bacharach & Bamberger, 2007; Bryant, Moulds & Nixon, 2003; Ehlers & Clark, 2003). Therefore, it is important to gather information regarding not only whether employees seek mental health treatment, but also how much time expires before employees seek treatment upon recognition of a problem. Unfortunately, in most occupations statistics regarding the percentage of employees who seek mental health treatment are not available, nor is information available regarding the amount of time that elapses before care is sought (Bamberger, 2009).

Some research has been conducted on the percentage of employees who use EAPs. For example, French, Dunlap, Roman and Steele (1997) found that 11% of their

1   sample used the EAP at their workplace. However, one difficulty with this type of
2   research is that it is unclear what percentage of employees within a given organi-
3   zation have a mental health problem, and therefore to estimate the percentage of
4   those with a problem who do or do not get treatment. For example, physical injuries
5   at work are substantially under-reported (Probst, Brubaker & Barsotti, 2008).

6   Given the recent combat operations in Iraq and Afghanistan, the military has not
7   only tracked the incidence of mental health problems in the months when personnel
8   return from deployment, but also whether they seek treatment for a mental health
9   problem when referred. Hoge *et al.* (2004) found that among active-duty military
10 personnel, between 23% and 40% reported seeking treatment for a mental health
11 problem. Milliken, Auchterlonie and Hoge (2007) conducted a longitudinal assess-
12 ment of mental health treatment-seeking among military personnel, where treat-
13 ment-seeking was assessed through medical records indicating whether the service
14 member had visited a military treatment facility for a particular diagnosis. They
15 found that among those referred for a mental health problem, 42% were seen within
16 90 days following the initial mental health screening, and 61% were seen within 90
17 days following a screening 3 to 6 months following deployment. However, the
18 percentage of treatment-seeking was lower for those referred for alcohol problems,
19 with only 21% getting treatment.

20 Unfortunately, treatment-seeking by National Guard soldiers could not be
21 examined in the study by Milliken, Auchterlonie and Hoge (2007) given the lack
22 of a standardized database for the storage of medical record information. However, a
23 recent study by Kehle *et al.* (2010) found that over 50% of National Guard Iraq
24 veterans who screened positive for a mental health problem did not report seeking
25 treatment for their difficulty. Kim *et al.* (2010) found that the percentages of National
26 Guard soldiers who reported seeking treatment were between 13% and 27%.

27 This brief review indicates that although estimates vary, in general a majority of
28 service members who are identified as having a mental health problem do not seek
29 treatment for their difficulty. In addition, it appears that employees in other high
30 stress occupations frequently do not get treatment for mental health problems, or
31 delay treatment-seeking until initial symptoms become severe enough to create
32 additional problems (Bamberger, 2009). In the next section we discuss research
33 examining those factors that distinguish employees who seek mental health treat-
34 ment from those who do not.

35

36

37 ## Determinants of the Decision to Seek Treatment

38

39 Researchers have begun to investigate the determinants of whether employees seek
40 needed mental health treatment. Much of this research has been done in the
41 military setting, but research has also been conducted on treatment-seeking
42 among first responders such as firefighters and paramedics. We review this work,
43 as well as research on the predictors of employee use of EAPs. One caveat we offer
44 regarding this latter area of research is that the use of EAPs may have more to do

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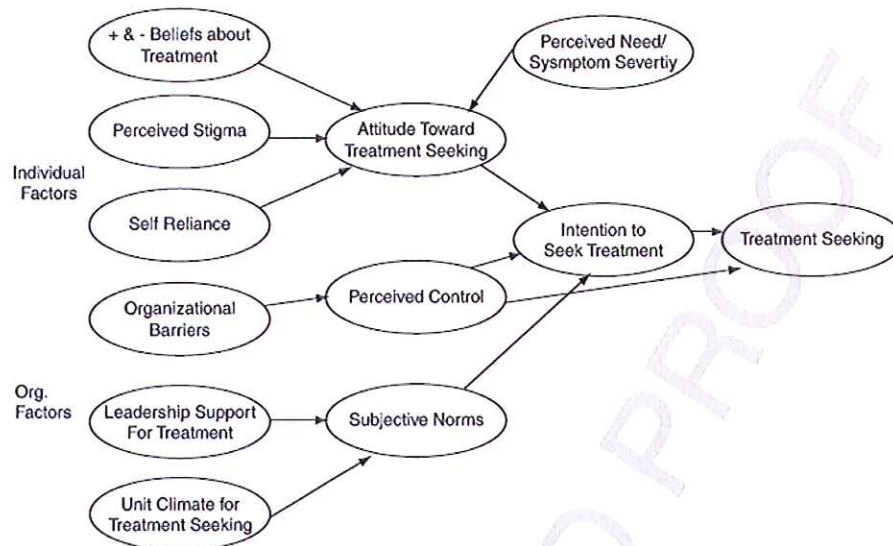
Figure 4.1 Individual and Organizational Determinants of Employee Treatment-Seeking

with reactions to non-work stressors than with the occupational hazards of severe stress at work.

In reviewing research on the decision to seek mental health treatment, we divide our summary into individual versus unit/organizational determinants of treatment-seeking. In Figure 4.1 we present the overall model guiding our review of the research. This model is similar to that of Bamberger (2009), with an emphasis on the individual and organizational factors that are likely to determine treatment-seeking in high stress occupations. In addition, our model emphasizes changes to the packaging of mental health treatment in high stress occupations.

Individual determinants of treatment-seeking

Employees involved in high stress occupations, such the military, firefighting, police work, and emergency response, place an emphasis on being resilient and handling problems themselves (Bamberger, 2009; Castro & Adler, 2011). Therefore, admitting one has a mental health problem resulting from exposure to work demands is difficult for these personnel, and seeking treatment for these problems may be even more difficult. Within the military, researchers have emphasized the stigma associated with admitting a mental health problem as a determining factor in the decision to seek treatment (Britt, 2000; Hoge *et al.*, 2004; Kim *et al.*, 2010; Pietrzak *et al.*, 2009).

Britt (2000) examined the stigma associated with mental health problems and treatment among military personnel returning from a peacekeeping mission to Bosnia. All personnel underwent a mental and physical screening to ensure any emergent problems could be treated upon return from the deployment. The mental health screening involved service members completing measures of PTSD,

1 depression, and alcohol abuse, and talking with a mental health professional if they
2 scored above a cutoff criterion for having a problem. A parallel procedure occurred
3 for physical problems. Participants completed a survey after the screening containing
4 questions about the stigma of admitting a problem in the military, as well as their
5 comfort in talking about psychological versus physical problems (if they scored
6 above the cutoff criteria for these problems), and their likelihood of following
7 through with their mental or physical health referrals.
8 Service members perceived more stigma when admitting a psychological than a
9 physical problem in the military, with the majority agreeing with the statement that
10 admitting a psychological problem would cause harm to their career and lead their
11 commander to treat them differently. Furthermore, personnel experienced more
12 discomfort when discussing psychological problems than physical problems with a
13 professional, especially when they were returning home with their unit (versus when
14 they were returning alone). Finally, personnel indicated a lesser likelihood of
15 following through with a referral for a psychological problem than a medical problem.
16 Hoge *et al.* (2004) also found that military personnel returning from combat
17 operations in Iraq and Afghanistan endorsed stigma as a concern with seeking
18 treatment, and that concerns about stigma were twice as high in veterans screening
19 positive for a mental health problem. These findings suggested that concerns related
20 to stigma were highest among the service members most in need of getting mental
21 health treatment. Many symptoms of mental health problems such as depression and
22 PTSD include social withdrawal, which likely serve as an additional obstacle to
23 treatment-seeking. Other studies replicated the finding that reports of stigma were
24 greater among individuals reporting greater mental health symptoms or screening
25 positive for a mental health problem (Britt *et al.*, 2008). Greene-Shortridge, Britt and
26 Castro (2007) proposed that concerns about the stigma associated with mental
27 health treatment are most relevant to individuals who have higher levels of
28 symptoms, and that employees without symptoms may not think about what it
29 would be like to seek treatment, and therefore may fail to consider the actual
30 consequences that would result from seeking treatment.
31 Although multiple studies have shown that service members endorse stigma as a
32 factor associated with the decision to seek mental health treatment, less research has
33 examined stigma as a predictor of actually seeking treatment. Britt, Greene, Castro
34 and Hoge (2006) found that among soldiers who admitted having a mental health
35 problem, those who also indicated seeking treatment for that problem reported less
36 stigma associated with seeking treatment. However, this study was cross-sectional,
37 and therefore could not rule out the possibility that those soldiers who sought
38 treatment came to perceive less of a stigma associated with seeking treatment. More
39 recent research has not shown stigma to differentiate service members who seek
40 treatment from those who do not (Britt *et al.*, 2011; Kim *et al.*, 2011). As we discuss
41 later, stigma is likely to contribute to negative attitudes toward treatment, which
42 should be a more proximal antecedent to seeking treatment.
43 The stigma-related concern about confidentiality of having sought mental health
44 treatment has been examined more generally as a predictor of using EAPs. French

et al. (1997) examined predictors of which employees used EAPs, and found that perception of confidentiality was a significant predictor of usage. Employees were less likely to use the program if they believed others could find out about it. These results reflect concerns about the potentially stigmatizing effects of using EAPs.

In addition to the stigma associated with mental health treatment, employees in occupations with a high operational tempo may not believe they have the time to attend lengthy treatment sessions or to investigate the various options for seeking mental health treatment. Hoge *et al.* (2004) found that military personnel endorsed operational barriers to mental health treatment, such as difficulty in getting time off for treatment and scheduling an appointment, and that reports of these barriers were again higher among those personnel screening positive for a mental health problem. Britt *et al.* (2008) showed that stigma and operational barriers to care were empirically distinct, and that barriers to care were especially related to reported depression among military personnel when work overload was rated as high. In addition, emergency personnel or employees involved in shift-work often work long and continuous hours that may complicate receiving necessary mental health treatment (Smith, Folkard, Tucker & Evans, 2011). Later in the chapter we discuss the implications of the fast-paced nature of highly involving jobs for the packaging of mental health treatment to employees.

Although stigma and operational barriers to care are two important factors that may influence an employee's decision to seek mental health treatment, researchers have recently turned their attention to additional determinants of treatment-seeking. In a review of prior research on factors that inhibit seeking treatment in the general population, Vogel, Wester and Larson (2007) identified four primary impediments: social stigma, treatment fears, a concern of showing emotion, and concerns about self-disclosing. Two additional deterrents were also identified that had not received as much research attention: social norms (support of others for getting treatment) and self-esteem (feeling worse about oneself for seeking treat-ment). All of these factors collectively assess perceived risks associated with getting counseling, and will likely be part of an individual's risk–benefit analysis when making a decision to seek treatment (Vogel, Wester, Larson & Wade, 2006).

Treatment fears refer to concerns an individual has about what will happen during treatment, including what the therapist will think, how the individual will be treated, and whether the individual will be forced to address certain issues (Amato & Bradshaw, 1985; Kushner & Sher, 1989). A concern over showing emotion is a specific fear associated with the therapy process (Vogel & Wester, 2003). Research has shown that those individuals who do not like to show their emotions exhibit more reluctance to seek treatment (Komiya, Good & Sherrod, 2000). Considering self-disclosure, individuals differ in their willingness to disclose personal informa-tion, emotional or not (Jourard, 1964). Not surprisingly, individuals who prefer not to disclose personal information tend to have more negative attitudes toward seeking mental health treatment (Vogel & Wester, 2003; Vogel, Wester, Wei & Boysen, 2005).

The norms for strength and not showing emotion in many high stress occupations will likely result in these factors playing an even greater role in an employee's decision

1   to seek mental health treatment. In addition, the concept of treatment fears may
2   relate to employees not knowing what happens in mental health treatment, or having
3   inaccurate perceptions of what occurs. Some intervention research with EAPs has
4   focused on increasing employee knowledge relative to the details regarding the
5   policies governing the company EAP, and information about substance and drug
6   abuse. Bennett and Lehman (2001) found that employees who had been part of an
7   intervention involving informational training about the EAP showed significant
8   increases in EAP knowledge compared with a control group. Additionally, those
9   employees in the informational intervention also reported being more likely to
10   recommend the EAP to others and less likely to ignore coworker problems or
11   stigmatize individuals with a substance abuse problem. In addition, Sinclair, Leo and
12   Wright (2005) found that employee knowledge of the benefits available to them was
13   predicted by their ratings of benefit communication quality, and that knowledge was
14   related to affective commitment toward the organization. This research suggests that
15   educating employees about what happens in mental health treatment may result in
16   more favorable attitudes toward treatment, and a greater likelihood that employees
17   will support others who seek treatment.
18   Vogel, Wester & Larson (2007) identified social norms as an under-investigated
19   predictor of treatment-seeking. Social norms represent the beliefs of those close to
20   the individual regarding whether people should get treatment when they are having
21   psychological problems. Social norms are similar to subjective norms within the
22   Theory of Planned Behavior (Ajzen, 1985), which proposes that individuals will be
23   more likely to form an intention to engage in a behavior when those close to the
24   individual support the individual engaging in the behavior, and the individual
25   believes it is important to comply with the wishes of these individuals. Within the
26   context of seeking mental health treatment, individuals will be more likely to seek
27   such treatment when important others support the individual getting treatment, or
28   perhaps even recommend they get treatment.
29   Considering employees in organizational settings, subjective norms are likely to
30   play an important role in the decision to seek treatment. As discussed in more detail
31   in the section on unit determinants of treatment-seeking, employees in high stress
32   occupations are typically heavily influenced by their immediate unit climate, and
33   therefore a primary determinant of seeking treatment may be the perception that the
34   decision is supported by close unit members. Milne, Blum and Roman (1994) found
35   that employee perceptions of their top management and direct supervisor support of
36   the EAP predicted employee confidence in the EAP, which in turn significantly
37   predicted propensity to use the EAP.
38   In contrast to research on the deterrents of seeking needed mental health
39   treatment, much less research has been conducted on those factors that facilitate
40   treatment-seeking. Vogel and Wester (2003) argued that the perceived benefits and
41   risks of getting treatment would influence one's attitude toward mental health
42   treatment and ultimately the receipt of such treatment. They assessed the perceived
43   utility of mental health treatment with a four-item scale consisting of questions such
44   as "How helpful would it be to self-disclose a personal problem to a counselor" and

"How likely would you be to get a useful response if you disclosed an emotional problem you were struggling with to a counselor" (Vogel & Wester, 2003, p. 354). Individuals responding to these types of questions presumably consider such factors as the reduction in personal distress that would result from receiving treatment, and perhaps the ability to function better in personal and occupational settings. More research is clearly needed on positive beliefs that individuals have about the benefits of therapy, as well as ways to get individuals to recognize the benefits of treatment when determining whether they will ultimately seek mental health care.

Research in military settings has examined some of these additional individual determinants of treatment-seeking. Kim et al. (2011) investigated beliefs about treatment and mental health professionals as a predictor of reported receipt of treatment, in addition to stigma and operational barriers to care, among active duty personnel who had participated in combat operations in Iraq and Afghanistan. They found that beliefs about problems and treatment (e.g., "I don't trust mental health professionals" and "Psychological problems tend to work themselves out without help"; see Mackenzie, Knox, Gekoski & Macaulay, 2004) was the only variable that distinguished soldiers with a mental health problem who sought treatment for that problem, from those who did not.

Britt et al. (2011) examined treatment-seeking among a Reserve Component sample of veterans, and also found that a measure assessing beliefs about psychological problems and treatment distinguished those veterans with a problem who reported seeking treatment from those who did not. They also found that the veteran's overall attitude towards seeking mental health treatment was predictive of a higher likelihood of seeking treatment. Kehle et al. (2010) also recently found that positive attitudes were associated with receiving treatment among National Guard veterans of the Iraq war. Finally, research on the use of EAPs has emphasized the importance of an employee trusting the program for their propensity to use it if needed (Milne et al.,1994).

In Figure 4.1, we illustrate how the individual factors discussed above are hypothesized to relate to an employee's decision to seek mental health treatment. These individual factors fall broadly within the Theory of Planned Behavior (TPB) (Ajzen, 1985; see Britt et al.,2011). According to the TPB, the intention to engage in a behavior (i.e., treatment-seeking) is influenced by three different factors: the overall attitude towards the behavior, perceived social norms for engaging in the behavior (referred to as subjective norms), and perceived control over the behavior. Determinants of the overall attitude towards the behavior include the number of positive versus negative beliefs about the behavior (i.e., costs and benefits of treatment, concerns about treatment, stigma), determinants of subjective norms include beliefs about what others important to the individual think about the behavior (including coworkers and unit leaders), and determinants of perceived behavioral control include beliefs about how much control the individual has over the behavior (which can be indexed by operational barriers to care).

The intention to seek treatment for a mental health problem should be stronger when the attitude towards seeking treatment is positive, when important others

support seeking treatment, and when the employee believes he or she has control over having the time and resources to get treatment. The intention to seek treatment should then be predictive of actually getting treatment, although research on the TPB has recently documented variables that intercede between the forming of an intention and engaging in a particular behavior. For example, Armitage (2006) described the role of implementation intentions in the intention–behavior link, where the individual forms an intention to perform the given behavior at a given time in a given location.

Importantly, Figure 4.1 presents two final individual determinants of an employee's decision to seek mental health treatment that do not fall neatly into the TPB. These factors are addressed in Andersen's (1995) behavioral model of healthcare utilization, and include the severity of the employee's symptoms and the magnitude of work demands facing the employee. Not surprisingly, employees who are exposed to greater trauma and who therefore experience more severe mental health symptoms are typically more likely to seek mental health treatment (Fikretoglu, Brunet, Guay & Pedlar, 2007; Kehle *et al.*, 2010; Milliken, Auchterlonie & Hoge, 2007). Studies linking the magnitude of operational stressors to treatment-seeking emphasize the importance of occupational hazards in the development of mental health problems.

Organizational determinants of the decision to seek treatment

Whereas some research has been conducted on individual determinants of treatment-seeking in high stress occupations, much less research has been conducted on organizational determinants. According to Figure 4.1, the unit and organizational climate related to the support for getting treatment should be associated with the employee's overall attitude towards treatment-seeking, as well as the subjective norms the employee perceives for getting treatment. Below we discuss the specific unit and organizational factors that should ultimately be related to seeking needed mental health treatment. Given the lack of research examining these factors, we pay particular attention to how they should be assessed in future studies.

Bamberger (2009) studied when employees will seek help for mental health problems, and highlighted the importance of unit-level factors in the decision to seek treatment. Bamberger argued that unit-level norms should influence the expectations that employees have about seeking help. For example, norms associated with the belief that employees should cope with problems themselves would result in negative expectancies associated with help-seeking, whereas unit norms associated with privacy, support, and encouragement to seek help would result in more positive expectancies about seeking help, thereby making help-seeking more likely. However, to our knowledge no research has been conducted addressing those unit factors most directly linked to employees seeking treatment for mental health problems.

We propose that theory and research on safety climate can be used to better understand the organizational, unit, and leadership influences on the decision to seek mental health treatment. The unit climate for treatment-seeking may operate similarly to the unit climate for safety behavior. In extending the safety climate

literature to the decision to seek treatment in high stress occupations, a number of parallels emerge. First, the decision to engage in safety behavior often involves a tradeoff between maximizing performance and maximizing a safe work environment. When workload is high, performance of safety behaviors can suffer (Zohar, 2010). Similarly, when employees in high stress occupations begin to develop mental health problems, the importance of a given mission and the sheer workload may result in employees putting off getting treatment, and instead focusing on performance. Sonnentag and Frese (2003) noted that employees will often attempt to sustain effective performance even as their well-being suffers. Under these conditions, the climate in a given organization and unit should have an influence on the employee's decision to get necessary mental health treatment even if such treatment risks a temporary reduction in performance.

In addition to the unit and organizational climate for treatment-seeking, research on the role of leadership in safety behavior also has relevance to an employee's decision to seek mental health treatment. Zohar (2010) argued that leadership is an antecedent of climate, where interaction with the leader and social learning inform employees about the relative importance of safety-related behavior. A parallel can be seen with treatment-seeking, in that supervisor attitudes towards treatment-seeking can inform an employee's decision to get needed treatment. If a supervisor places little importance on employee psychological well-being, as perceived through exchanges with the leader and implementation of policy, it is unlikely that employees will perceive a strong climate and their resulting motivation to seek treatment may be diminished. Just as management support for safety is a primary component in safety performance (Zohar, 1980), "higher up's" support for treatment-seeking may be a primary component in the decision to seek treatment within complex hierarchical organizations, such as the military.

Implications of Our Model for Organizational Practice

Given that mental health problems have been linked to exposure to highly stressful events at work, we argue it is the organization's responsibility to ensure the timely receipt of mental health treatment for employees who develop mental health problems (Castro & Adler, 2011). Importantly, employees in high stress occupations embody the resiliency-based traits of independence and self-reliance that will make it difficult for them to get treatment when needed. Therefore, organizations need to take steps proactively to facilitate employee receipt of necessary mental health treatment. In the present section of the chapter we discuss the importance of normalizing the receipt of needed mental health treatment, emphasizing that getting mental health treatment will prevent more severe problems from affecting employee performance, and tailoring mental health treatment to the occupational context of high stress occupations.

Employees may not seek mental health treatment because they believe getting treatment is a sign of personal failure, of not being able to handle the problem

themselves. However, if employees are made aware of the mental health conse-
quences of exposure to highly stressful events, they should realize that the devel-
opment of symptoms is a normal response to severe occupational stressors. If
employees know that a sizeable minority may develop symptoms indicative of
mental health problems in response to these occupational hazards, the locus of
causality for the development of the problem will be identified in the exposure to
occupational hazards rather than personal weakness (Bamberger, 2009). Assigning
causality for the mental health problem to the occupational setting should facilitate
employees getting treatment, and the more employees who get treatment, the greater
the normalization of treatment-seeking in a given unit or organization.

One potential obstacle to the normalization of mental health treatment is the view
that getting mental health treatment represents a failure of primary and secondary
prevention. Tripartite models of prevention (Ivancevich, Matteson, Freedman &
Phillips, 1990) view the receipt of mental health treatment as a tertiary level of
prevention, and the models implicitly assume that the need for mental health
treatment represents failures of initial attempts at prevention to avert the develop-
ment of a mental health problem. We would argue that the receipt of needed mental
health treatment as a result of exposure to occupational hazards can occur in parallel
with attempts at primary and secondary prevention. For example, resiliency training
for employees in high stress occupations is frequently viewed as a primary prevention
directed towards buffering employees from the development of mental health
problems. However, in its resiliency training the US Army emphasizes that mental
health problems can result from exposure to occupational hazards, and therefore
soldiers should seek treatment when necessary so that problems do not become more
severe (Adler, Bliese, McGurk & Hoge, 2009). The fact that treatment-seeking and
resiliency training can co-occur emphasizes that despite attempts to strengthen an
employee's ability to cope with severe occupational stressors, mental health pro-
blems can result in response to exposure. Employees should view resiliency training
and mental health treatment as two different but compatible ways to maintain
operational readiness so as to be an effective unit member.

As discussed earlier, one reason mental health treatment is not viewed as a
resource for maintaining resiliency is that employees may have negative attitudes and
erroneous beliefs regarding what happens in mental health treatment. For example,
employees may believe mental health treatment will involve lengthy sessions that
continue for a long period of time and that will negatively affect individual and unit
performance. They may also believe treatment will leave a "black mark" on their own
record, and that these costs outweigh the potential benefits of treatment. Employees
may also believe they will be given medication for their problems, the side-effects of
which may hurt their performance as well as the performance of their unit. In
addition to educating employees regarding evidence-based treatments that exist to
treat mental health problems resulting from exposure to severe occupational hazards
(see Karlin et al., 2010), we would argue it is also necessary to do a better job of
tailoring mental health treatments to the organizational culture of high stress

occupations. For example, employees in occupations like the military, law enforcement, and firefighting frequently view their work as an important part of their personal identity. If mental health professionals do not recognize the importance of work to the employee, and mental health treatments do not highlight work-related experiences, the employee may be hesitant to seek or remain in treatment.

Recent research has examined the importance of incorporating work-related experiences into treatment for work-related mental health complaints. Blonk, Brenninkmeijer, Lagerveld and Houtman (2006) were interested in whether employees who were on leave for mental health problems would return to work faster when work-related experiences were integrated into traditional cognitive behavioral treatment (CBT). Results showed that employees in the work-integrated CBT treatment group returned to work faster than those in traditional CBT and control conditions.

We believe that mental health treatment focused on getting employees back to work would be especially appealing to individuals in high stress occupations who are committed to their jobs. Unfortunately, little research has been conducted on how much of a work focus occurs in traditional mental health treatments for problems created by occupational hazards. The importance of better understanding whether employees will seek needed mental health treatment will hopefully result in more research attention being directed towards whether work-related elements of the organizational culture are incorporated into existing mental health treatments, and how a greater focus on these elements may result in a greater acceptance of mental health treatment among employees in high stress occupations.

In summary, employees in high stress occupations frequently develop mental health problems as a result of exposure to traumatic events that should be viewed as occupational hazards. Ensuring that employees get needed treatment for these problems is an organization and leadership responsibility. In the present chapter we identified a number of individual and unit/organizational determinants of the decision to seek mental health treatment, and have provided suggestions for how to normalize the receipt of mental health treatment and better incorporate the organizational culture of high stress occupations into treatment so that more employees with problems might get help. Future research is needed to better understand the relative importance of different factors in the decision to seek treatment, and to evaluate how changes to mental health treatment and the dissemination of such treatment influences the percentages of employees getting needed help.[1]

Note

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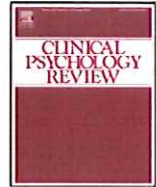
Connecting active duty and returning veterans to mental health treatment: Interventions and treatment adaptations that may reduce barriers to care

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HIGHLIGHTS

► Barriers to care include stigma, practical barriers, and treatment perceptions.
► Treatment adaptations and other interventions may help address these barriers.
► Adaptations include brevity, flexibility, and use of technology.
► Interventions also reframe perceptions and include military-specific components.
► Future research should examine the efficacy of these adaptations.

ARTICLE INFO

ABSTRACT

Recent military operations in Afghanistan and Iraq have involved multiple deployments and significant combat exposure, resulting in high rates of mental health problems. However, rates of treatment-seeking among military personnel are relatively low, and the military environment poses several obstacles to engaging in effective clinical interventions. The current paper first reviews barriers and facilitators of treatment-seeking and engagement among military personnel, including stigma, practical barriers, perceptions of mental health problems, and attitudes towards treatment. Next, this paper reviews treatment adaptations and other interventions that are intended to reduce barriers to care among active duty and returning military personnel. These include early interventions, brief formats, integrating clinicians into the medical and military context, technology-based interventions, addressing negative treatment perceptions, screening/early identification, and enlisting unit support.

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Contents

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1. Introduction

Since September 11, 2001, American service members have deployed nearly 3.3 million times to Iraq or Afghanistan. This number, as of October 2009, reflects the fact that over 2 million individual service members have deployed, with nearly 800,000 deploying multiple times (Tan, 2009). Current military operations frequently involve multiple deployments and high intensity guerilla warfare, resulting in heightened exposure to traumatic events such as direct fire, witnessed violence, and physical injury (J-MHAT 7, 2011; Seal, Bertenthal, Miner, Sen, & Marmar, 2007; Wright, Huffman, Adler, & Castro, 2002). For example, commonly reported stressors among soldiers and marines returning from military operations in Afghanistan and Iraq include roadside bombs, length of deployment, handling human remains, killing an enemy, seeing dead or injured Americans, and being unable to stop a violent situation (Hoge et al., 2004). In studies of soldiers and marines who deployed to Iraq, 71–86% reported having engaged in a firefight, 50–57% had handled human remains, and 55–58% had experienced an improvised explosive device (Hoge et al., 2004; J-MHAT 7, 2011). Combat exposure is associated with a high risk of developing mental health problems, including posttraumatic stress disorder (PTSD), depression, and substance abuse/dependence (e.g., Kessler, Sonnega, Bromet, Hughes, & Nelson, 1995).

Despite these needs, rates of mental health treatment-seeking among military personnel are low. Therefore, it is important to understand barriers and facilitators of treatment-seeking in this population. In order to facilitate receipt and delivery of effective treatments, it is also important to evaluate the empirical support for interventions designed to alleviate the mental health problems that are commonly encountered in military settings. Although several of these treatments have been evaluated for the veteran population, fewer have been tested among active duty personnel. In the present review we pay special attention to the challenges associated with active duty service members seeking and benefiting from mental health treatment (e.g. stigma, demanding work schedules, low emotional engagement), and discuss adaptations to evidence-based treatments that can improve their effectiveness when applied to the active duty and returning veteran population.

The present review begins with a discussion of the prevalence of psychiatric disorders and mental health treatment-seeking in military populations. We then summarize research on barriers and facilitators of treatment-seeking and effectively engaging in treatment. Next, we review treatment-outcome studies that have been conducted with active duty and returning veterans, with a focus on how these treatments address the challenges of delivering treatment in the military environment. Finally, we describe the importance of treatment adaptations that address barriers to care among military personnel, and programs that attempt to reduce the stigma associated with getting needed treatment.

2. Prevalence of psychiatric disorders

Studies estimate that 19–44% of soldiers returning from Afghanistan or Iraq (Operation Enduring Freedom (OEF), Operation Iraqi Freedom (OIF)) meet current criteria for a mental health diagnosis (Hoge, Auchterlonie, & Milliken, 2006; Kim, Thomas, Wilk, Castro, & Hoge, 2010; Milliken, Auchterlonie, & Hoge, 2007; Seal et al., 2007; Seal et al., 2009). Approximately 14–28% meet current or past year criteria for PTSD (Seal et al., 2009; Tanielian et al., 2008; Thomas et al., 2010), 13–14% meet criteria for depression (Seal et al., 2009; Tanielian et al., 2008; Thomas et al., 2010) and 3–5% meet criteria for alcohol or drug use disorders (Seal et al., 2009). In a representative sample of the U.S. population, the rate of current PTSD is estimated to be 3%, and the rate of major depressive disorder is estimated to be 7% (Kessler, Chiu, Demler, & Walters, 2005). Therefore, the estimated prevalence of PTSD is five to seven times higher and the prevalence of depression is twice as high among recently deployed service members. The prevalence of alcohol and drug use disorders appears to be similar across civilian and deployed military personnel samples (Grant et al., 2004; Ramchand et al., 2011).

3. Mental health treatment-seeking

Despite high rates of mental health disorders, a large portion of soldiers do not get help for their difficulties. Several studies of recently deployed service members indicate that approximately half of individuals with a mental health problem do not seek mental health services (Hoge et al., 2006; Kehle et al., 2010; Tanielian et al., 2008). In a study of soldiers and Marines who met criteria for a psychiatric disorder, only 23 to 40% reported receiving professional help during the previous year (Hoge et al., 2004). Furthermore, most soldiers do not pursue follow-up care after their initial referral to mental health treatment. In a study of Iraq veterans, only 42% of those referred for mental health treatment received follow-up care (Milliken et al., 2007). Therefore, it appears that soldiers do not seek or receive mental health services commensurate with the high needs for treatment in this population.

4. Barriers to mental health treatment-seeking

Prior researchers have posited that one of the primary reasons soldiers do not seek treatment for psychological problems is the stigma associated with admitting psychological difficulties (Britt, 2000; Greene-Shortridge, Britt, & Castro, 2007; Porter & Johnson, 1994). Soldiers may believe that seeking treatment from a mental health professional will lead other soldiers to view them as weak and incapable of handling their own problems, and that their commanders will view and rate them differently. Britt (2000) examined the stigma associated with having a psychological versus medical problem among soldiers ($N = 800$) returning from a peacekeeping mission to Bosnia. Britt (2000) found that 61% of soldiers agreed with the statement that admitting a psychological problem would harm their career (compared to 43% for admitting a medical problem) and 45% believed that admitting a psychological problem would cause their co-workers to have less confidence in them (compared to 22% for a medical problem). Overall, the stigma associated with admitting a psychological problem was significantly higher than the stigma associated with admitting a medical problem.

Similarly, a study of OEF/OIF veterans found that one in three service members were concerned about stigma associated with mental health treatment-seeking (Hoge et al., 2004), and another study of Iraq

veterans found that 70% had a concern about being labeled as having a mental disorder (Stecker, Fortney, Hamilton, & Ajzen, 2007). These concerns are likely to be elevated in the military environment due to the fact that commanding officers have access to service members' mental health records, and service members who are seen as "unfit" for service can be discharged or removed from duty (Porter & Johnson, 1994; Vogt, 2011).

In addition to the stigma of seeking treatment, researchers have found that service members perceive practical barriers associated with getting care, such as not having adequate transportation to get to treatment, not being able to get time off for treatment, and not having financial resources for treatment (Britt et al., 2008; Hoge et al., 2004; Sayer et al., 2009; Wright et al., 2009). Hoge et al. (2004) found that soldiers returning from Iraq who scored positively for a mental health problem were twice as likely as other troops to report fear of stigmatization and concern about practical barriers to obtaining psychological help. In addition, Britt, Greene, Castro, and Hoge (2006) found that among soldiers reporting a psychological problem, those who sought treatment for their problem reported lower stigma and fewer barriers to care than those who did not seek treatment. Research has shown that stigma and practical barriers to care represent two different dimensions regarding why service members do not seek needed treatment (Britt et al., 2008; Wright et al., 2009), and will likely require different interventions to encourage treatment-seeking.

Although most of the research on determinants of treatment-seeking in a military setting has focused on stigma and practical barriers to care, some recent research has investigated the role of personal beliefs about mental illness and treatment. Regarding personal beliefs about mental illness, one qualitative study of active-duty male Air Force personnel experiencing symptoms of PTSD found that soldiers felt they could handle the problems themselves, that they were not ready to talk about their problems, and that they did not want to make a big deal out of their symptoms (Visco, 2009). Similarly, Britt et al. (2011) found that Reserve Component veterans who had a mental health problem but did not seek treatment reported beliefs that the problem was not severe or that the veteran could handle the problem themselves. Beliefs that psychological problems can be handled oneself may delay treatment-seeking (MacKenzie, Gekoski, & Knox, 2006; Mackenzie, Knox, Gekoski, & Macaulay, 2004). Such beliefs may be more prevalent in military settings, where soldiers are expected to "tough out" difficult emotions (Nash, Silva, & Litz, 2009; Vogt, 2011).

Studies have also identified beliefs about mental health treatment that serve as barriers to care. These include beliefs that providers are untrustworthy or won't understand them, that treatment is not helpful, that treatment is only for extreme problems, and that negative side effects will be experienced in response to medication (Edlund, Fortney, Reaves, Pyne, & Mittal, 2008; Kim, Britt, Klocko, Riviere, & Adler, 2011; Sayer et al., 2009). In addition, a discouraging social network and lack of knowledge about mental illness represent potential determinants of treatment-seeking behavior in military populations (Sayer et al., 2009).

A small number of studies have empirically examined the relationships between these attitudes and treatment-seeking. In a study of soldiers who had deployed to Iraq, negative attitudes about mental health care were associated with decreased likelihood of seeking treatment (Kehle et al., 2010). Among National Guard and reservist soldiers, negative beliefs about psychotherapy and decreased levels of perceived unit support were associated with more stigma and barriers to care. Negative beliefs about mental health care have also been associated with decreased likelihood of seeking counseling and medication (Pietrzak, Johnson, Goldstein, Malley, & Southwick, 2009). Kim et al. (2011) examined treatment-seeking in active duty soldiers deployed to Iraq, and found that negative beliefs about mental health treatment and mental health professionals distinguished soldiers with a mental health problem who sought treatment from those who did not. These studies suggest that stigma, access to care, and beliefs about mental health treatment all represent important barriers to mental health service use. Therefore, interventions that address these barriers would likely be of benefit in facilitating mental health treatment-seeking.

5. Facilitators of mental health treatment-seeking

In contrast to research on the barriers to mental health treatment seeking, little research has examined facilitators of treatment-seeking in military samples, and only a few studies have focused on active duty service members. Two studies have examined the relation between leadership and barriers to care. Wright et al. (2009) surveyed 680 soldiers in combat support units three months after deployment to Iraq. Findings indicated that soldiers who rated their leaders (officers) more highly on leadership skills and reported higher unit cohesion were less likely to report stigma towards mental health treatment-seeking. They were also less likely to endorse barriers to care such as scheduling and logistical difficulties. Britt, Wright, and Moore (2012) examined noncommissioned officer (NCO) and officer leadership (both positive and negative leader behaviors) as predictors of stigma and practical barriers, both between soldiers and within soldiers over a three month time period. These authors found that NCO leadership was a stronger predictor of stigma and barriers to care than officer leadership, which is consistent with the argument that NCOs have a more direct impact on their unit members (Knapp, McCloy, & Heffner, 2004; Van Iddekinge, Ferris, & Heffner, 2009). Furthermore, within soldiers, changes in negative leader behaviors were associated with changes in perceived stigma over a three-month time period, whereas positive leader behaviors were associated with fewer barriers over the same time period.

A third study was restricted to active duty Canadian military members who met criteria for a lifetime PTSD diagnosis (Fikretoglu, Brunet, Schmitz, Guay, & Pedlar, 2006). In this study, participants with a history of sexual trauma were more likely to seek treatment than those exposed to war zone trauma. Individuals with more instances of trauma exposure and whose symptoms interfered with functioning were also more likely to seek treatment. Finally, being married or previously married, as well as reporting an income of $40–$60K per year (vs. >$80K), was associated with increased likelihood of seeking treatment.

Other studies of facilitators of mental health treatment-seeking among military personnel have relied on veteran samples. In one study of 174 veterans who had sought outpatient treatment for PTSD at a Veterans Affairs (VA) Medical Center, previous inpatient mental health treatment, but not PTSD symptom severity, was associated with future mental health service use (Elhai et al., 2007). In a study of Australian Vietnam war veterans, researchers found that veterans were more likely to self-refer for government-funded treatment if they had negative feelings towards others after arriving home, if they felt discriminated against for Vietnam veteran status, if they were reluctant to reveal their veteran status, or if they recently talked or argued about Vietnam (Dobson, Grayson, Marshall, & O'Toole, 1998).

One qualitative study of 44 Vietnam and OEF/OIF veterans examined the determinants of PTSD treatment-seeking (Sayer et al., 2009). Treatment facilitators were grouped into four themes: a) recognition and acceptance of PTSD and availability of help, b) treatment-encouraging beliefs, c) system facilitation, and d) social network facilitation and encouragement. Examples of treatment-encouraging beliefs were "getting help is socially acceptable," "treatment is helpful," and "the system is trustworthy." System facilitators included procedures that reduced stigma, improved access and PTSD recognition, as well as providers that promoted help-seeking. Taken together, these studies indicate that trauma history, symptom interference, prior treatment-seeking behavior, supportive organizational climate, social facilitation, systems that promote treatment-seeking, and beliefs about treatment represent

facilitators of treatment-seeking among military service members. Further research is needed to determine which of these facilitators are most important in determining treatment-seeking behavior.

6. Barriers to effectively implementing mental health interventions with military service members

Aside from barriers to accessing mental health treatment, such as stigma and difficult work schedules, certain barriers to effectively implementing mental health interventions have been noted among military personnel. First, researchers have observed that engagement in treatment and developing a therapeutic relationship are frequently a problem when treating military personnel (Flack, Litz, & Keane, 1998). Similarly, emotional detachment presents a particular challenge for the implementation of techniques that require significant engagement with traumatic memories and threatening stimuli (Reger & Gahm, 2008). Furthermore, anger is a prominent feature of combat-related PTSD, with one study of Vietnam veterans finding that anger accounted for 40% of the variance in PTSD scores after controlling for age, education, and combat exposure (Novaco & Chemtob, 2002). In a study of 103 veterans, Forbes et al. (2008) found that anger predicted worse PTSD treatment outcome (i.e., more symptoms at 9 month follow-up). The authors suggested that anger can impair the ability to engage in trauma-related fear during therapeutic exercises, interfere with the therapeutic alliance, inhibit self-reflection, and result in premature termination. Not surprisingly, researchers have noted that cognitive–behavioral interventions are difficult to implement with military populations until improved arousal management has been achieved (Creamer & Forbes, 2004).

These problems may be prominent among military personnel for several reasons. First, elevated rates of childhood trauma exposure and difficulty trusting civilians may lead to interpersonal difficulties, including challenges in developing a therapeutic alliance. Second, military training that emphasizes mental toughness, the need to shut down emotions, and the use of anger as an adaptive way to respond to threat could lead to trouble experiencing fear and other relevant emotions in mental health treatment (Creamer & Forbes, 2004; Forbes et al., 2008). Third, lengthy combat deployments that involve emotionally challenging work could encourage prolonged hyperarousal and emotional detachment, and potentially lead to changes in biology that result in "treatment resistant PTSD" (Creamer & Forbes, 2004; Reger & Gahm, 2008). Fourth, military service members are primarily male, and men have been shown to be less responsive than women to pharmacological and psychological treatment for PTSD (Foa, Keane, & Friedman, 2000). Finally, a particular barrier for active duty service members involves their fluctuating assignments and frequently changing duty stations, which results in high dropout rates from treatment (McLay et al., 2011). Although researchers and clinicians have often described these barriers to treatment engagement among military personnel, their conclusions have been primarily based on clinical observation and theory. Therefore, more research is needed to confirm the prevalence of these barriers, and to examine their relationship with treatment outcomes.

We next describe interventions and treatment adaptations that have been developed to address barriers to care and facilitate receipt of needed treatment among active duty and returning veterans. We first describe several early or preventive interventions that have been applied within the military context in the hopes of returning soldiers to duty quickly before symptoms reach a high level. We then address adaptations that have been made to traditional mental health treatment in order to enhance the likelihood that service members will access and engage in treatment. Finally, we describe interventions that are not intended to treat symptoms, but also serve to facilitate mental health treatment-seeking. Throughout our review, we focus on the importance of empirically evaluating the effectiveness of these interventions and modifications to ensure service members are receiving evidence-based care.

7. Early, preventive interventions that may address barriers to care

Early and preventive interventions are more likely than formal mental health treatments to be delivered in the operational environment while the service member is still in the presence of his or her primary unit. Therefore, preventive interventions may bypass some of the logistical factors that deter military personnel from seeking formal mental health treatment. They may also facilitate treatment-seeking by encouraging early recognition of problems that require further treatment, and by reducing stigma towards formal mental health treatment-seeking. In the present section we discuss a number of such interventions, and highlight the importance of establishing their efficacy. Table 1 summarizes early interventions, barriers/facilitators addressed, and outcomes for studies that included active duty or OEF/OIF veterans. To interpret effect sizes, we followed Cohen's (1988) guidelines: .2 = small; .5 = moderate; .8 = large.

7.1. Combat Stress Control Treatment

One category of these interventions falls under the domain of Combat Stress Control Treatment (CSC). This treatment adopts the U.S. Department of Defense's BICEPS, PIES, and PIE principles (Department of Defense, 1999). BICEPS is an acronym that subsumes the PIES and PIE principles, and stands for the following:

Brevity. Treatment is short-term, problem-focused, and geared towards return to service.
Immediacy. Offer treatment as soon as symptoms are evident. This conveys that a psychological injury is taken as seriously as a physical injury, and maintains an expectation of recovery and return to duty.
Centrality. Treatment is offered in a centralized Combat Stress Control unit, which is kept separate from the medical unit. The aim is to reduce stigma associated with seeking mental health services.
Expectancy. Treatment conveys the expectation that soldiers will recover and return to duty.
Proximity. Care is provided as close to the battlefield as possible. The aim is to reinforce the idea that soldiers will recover, do not need to be stigmatized and separated from their units, and will return to duty.
Simplicity. Aside from psychotherapy, treatment ensures that basic needs are met, such as rest, food, hygiene, and reassurance.

In one study of 38 active duty personnel who were referred by mental health providers, participants completed a two day CSC program while deployed to Iraq (Potter, Baker, Sanders, & Peterson, 2009). The program consisted of psychoeducational classes and individual therapy sessions that focused on stress reactions, coping skills, stress management, and interpersonal relationships. Program completers exhibited reduced PTSD symptoms and general distress, resulting in a moderate pre-post effect size. Although the study did not include a comparison group, these findings suggest the potential utility of applying this brief form of treatment to soldiers in a deployed setting.

7.2. Psychological debriefing

Other brief, early interventions are intended to prevent chronic symptoms and are based on the psychological debriefing model. This approach typically involves group sessions after exposure to traumatic stressors that focus on sharing emotional responses and normalizing common reactions (Raphael & Wilson, 2000). Such approaches may help combat stigma towards mental health treatment-seeking, since they are not presented as mental health treatment, but rather as an opportunity to share common reactions to extreme stressors in the context of an organizational duty. One of these models is termed Critical

Table 1
Intervention adaptations, barriers/facilitators addressed, and treatment outcomes.

Study	Sample	Intervention conditions	Setting	Treatment adaptations	Barriers/Facilitators addressed	Outcome measures	Average pre-post effect sizes (d)
Early, preventive interventions							
Adler et al. (2008)	952 active duty peacekeepers	Critical incident stress debriefing (CISD)	Base camps during deployment	Brief group debriefing Administered by military personnel	Practical barriers (time, access) Stigma	PCL; CES-D; Conflict Tactics Scale	0.06 8.5 month follow-up: .16
Adler et al. (2009)	2297 OEF/OIF returning veterans	1. Battlemind debriefing 2. Small Battlemind training 3. Large Battlemind training 4. Stress education	U.S. military installation; Small groups in classrooms; Large groups in theater	Brief Emphasize reintegration Reframe treatment perceptions Incorporated into standard reintegration training	Practical barriers (time, access) Stigma Negative mental health perceptions Early symptom identification	PCL; PHQ-Depression; Sleep problems; Stigma	1. .09[a] 2. .02 3. .09
Blevins et al. (2011)	144 OEF/OIF returning veterans	1. Life Guard workshop intervention 2. Delayed intervention control	U.S. drill training sites	Brief, interactive workshop Incorporated into military training Peer support	Practical barriers (time, access) Engagement Encouraging social network	Short Form Health Survey-12, PHQ-9, Generalized Anxiety Disorder scale (GAD), panic screen from Brief PHQ, PCL-C, Buss-Perry Aggression measure, Dyadic Adjustment Scale (DAS), CTS, AUDIT	Significant changes: 1. PHQ-9, GAD, PCL-C, DAS 2. None
Bryan and Morrow (2011)	192 active duty soldiers	Defender's Edge (DEFED)	During deployment; skills training during battle drills, training, missions; services in medical offices	Emphasizes resiliency Reframes symptom/ treatment perceptions Conducted in context of work duties Clinician military integration Medical and work duty settings	Practical barriers (time, access) Stigma Negative mental health perceptions Engagement Early recognition	–	–
Potter et al. (2009)	38 active duty soldiers	Individual and group Combat Stress Control (CSC) treatment	CSC Restoration Center at an Air Base during deployment	Uses BICEPS principles	Practical barriers (time, access) Stigma	PCL-M; Outcome Questionnaire-45	0.54
Brief interventions integrated into military and medical settings							
Cigrang et al. (2011)	15 OEF/OIF veterans	PE/CPT	Primary care clinic at an Army medical center	Brief Delivered in primary care	Practical barriers (time, access) Stigma	PSSI-I PCL-M PHQ-9 Behavioral Health Measure	0.43
Corso et al. (2009)	19 active duty soldiers	1. Writing exposure 2. Impact statement (cognitive restructuring) 3. TAU	Family medicine clinic at an Air Force base	Brief Delivered in primary care	Practical barriers (time, access) Stigma	PCL-M; Behavioral Health Measure-20	1. 0.72 2. 1.47 3. 0.49
Steenkamp et al. (2011)	8 active duty Marines	PE/CPT	Behavioral health clinic at Marine Camp	Brief In garrison Avoided stigmatizing language Targeted grief, shame, guilt	Practical barriers (time, access) Stigma Negative perceptions of mental health Military-related beliefs	PCL PHQ	1.73
Virtual Reality Therapy							
McLay et al. (2011)	20 active duty soldiers	1. VR-GET 2. TAU	U.S. Navy medical facilities	Virtual reality Physiologic monitoring Skills training	Practical barriers (time, access) Engagement Stigma	CAPS	1. 1.29 2. 0.44
Reger et al. (2011)	24 active duty soldiers	VRE	U.S. Army medical center	Virtual reality	Practical barriers (time, access) Engagement Stigma	PCL-M	1.17
Telehealth service delivery							
Litz et al. (2007)	45 service members, OEF/OIF or 9/11 exposure	1. Self-management CBT 2. Supportive counseling	Internet (while in U.S.)	Internet-based delivery	Practical barriers (time, access, resources) Stigma	BAI BDI-II PSSI-I	Pre-post 1. 1.00 2. 0.68 6 month follow-up 1. 1.63 2. 0.80

Table 1 (continued)

Study	Sample	Intervention conditions	Setting	Treatment adaptations	Barriers/Facilitators addressed	Outcome measures	Average pre-post effect sizes (d)
Telehealth service delivery							
Morland et al. (2011)	13 veterans (38% OEF/OIF)	1. In-person group CPT 2. Teleconference group CPT	VA clinic conference room	2 sessions p/week Group teleconference delivery Pretreatment PTSD psychoeducation Modified CPT language to ease understanding for veterans	Practical barriers (time, access, resources) Beliefs about mental health	CAPS	Significant difference on CAPS for both groups; no difference between groups
Strachan et al. (2011)	31 OEF/OIF veterans	1. PE/BA in-person 2. PE/BA home based telehealth	VA medical center or home (in U.S.)	Telehealth delivery	Practical barriers (time, access) Stigma	PCL-M BDI-II BAI	1. 0.50 2. 0.67
Tuerk et al. (2010)	47 combat veterans (72% OEF/OIF)	1. PE in-person 2. PE via telehealth	VA medical center or home (in U.S.)	Telehealth delivery	Practical barriers (time, access) Stigma	PCL-M BDI-II	1. 3.20 2. 2.58
Group Therapy							
Alvarez et al. (2011)	197 veterans (8% OEF/OIF)	1. CPT 2. TAU	VA residential treatment program	Group format Pretreatment PTSD psychoeducation Modified language to be more relevant for veterans	Practical barriers (resources) Beliefs about mental health	PCL, BDI, Brief COPE, Symptom Checklist-6, Quality of Life-BREF	1. 0.12 2. 0.04
Norman et al. (2010)	14 OEF/OIF veterans	Seeking Safety (SS)	VA medical center	Brief	Practical barriers (time) Treating complex problems	PCL-M; BDI-II	0.76
Screening and Early Identification							
Hoyt and Candy (2011)	Madigan Army Medical Center	Army-wide screening	U.S. Army medical center	Contact with provider Psychoeducation on symptoms Referrals from commanders	Stigma Early symptom identification Organizational support		
Engel et al. (2008)	30 primary care providers	RESPECT-MIL	U.S. Army primary care clinic	Screen mental health problems in primary care settings Interface between primary care and mental health clinics	Stigma Early symptom identification Treatment engagement		
Enlisting fellow unit members to assist service members in need of treatment							
Payne et al. (2008)	Active duty Army soldiers	Unit Watch	In garrison and operational settings; all unit locations/activities outside of clinic	Unit members reduce suicidal/homicidal risks and ensure soldier stays in outpatient treatment	Stigma of inpatient care Support network		
Greden et al. (2010)	National Guard and Reserves returning veterans	Buddy-to-Buddy	U.S. drill training sites	Peers assess mental health needs and connect soldiers with resources	Stigma Support network Early symptom identification		

PCL = PTSD Checklist; PHQ = Patient Health Questionnaire; CAPS = Clinician Administered PTSD Scale; PSSI-I = PTSD Symptom Scale, Interview Version; IES = Impact of Events Scale; CES-D = Center for Epidemiological Studies-Depression Scale; BDI = Beck Depression Inventory; CES-D = Center for Epidemiological Studies Depression Scale; BAI = Beck Anxiety Inventory; AUDIT = Alcohol Use Disorders Identification Test; CTS = Conflict Tactics Scale.

PE = Prolonged Exposure; VRE = Virtual Reality Exposure Therapy; VR-GET = Virtual Reality Graded Exposure Therapy; TAU = Treatment As Usual; BA = Behavioral Activation; CPT = Cognitive Processing Therapy.

[a] Baseline scores were not provided. Therefore, average d was calculated using 4 month follow-up scores, with stress education as the referent group.

Incident Stress Debriefing (CISD) and consists of guiding groups through a seven-stage discussion after exposure to a severe stressor. In a randomized trial of CISD with platoons of 952 peacekeepers, the intervention was administered by behavioral healthcare providers who were also military personnel (Adler et al., 2008). CISD was compared to a stress management class and no intervention. Overall, PTSD symptoms in the CISD group were not significantly different from the no intervention group. For soldiers reporting a high degree of exposure to stressors, CISD was minimally associated with lower PTSD symptoms and aggression, higher organizational support, and more alcohol problems. The authors concluded that there are no clear positive effects of CISD, although it provides an intervention that is sensitive to the military work culture and consistent with military traditions involving group debriefing.

A second study of psychological debriefing approaches as applied to active duty personnel examined the effects of an intervention titled "Battlemind" (Adler, Bliese, McGurk, Hoge, & Castro, 2009). Battlemind debriefing and training interventions emphasize reintegration to life in a garrison environment following combat and principles that resonate with soldiers, such as "mental toughness," unit cohesion, peer and leader support, and overcoming adversity. The intervention also provides information on common psychosocial reactions to combat. Finally, the

interventions reframe post-deployment difficulties as resulting from effective occupational skills that can become problematic at home if not adapted (e.g., maintaining tactical alertness in combat can lead to hypervigilance at home). Soldiers are encouraged to adapt combat skills for the home environment (e.g., forming close bonds with unit members can translate to forming close bonds with family members).

In a randomized trial with 2297 soldiers following deployment to Iraq, Adler et al. (2009) compared Battlemind debriefing and training to a stress management condition. Among soldiers with high levels of combat exposure, Battlemind debriefing and training resulted in fewer PTSD symptoms, depression symptoms, and sleep problems. Large group Battlemind training participants with high combat exposure also reported lower levels of stigma. These findings support the efficacy of this early intervention for at-risk service members post-deployment. However, it should be noted that a few studies of civilian populations have reported symptom exacerbation following psychological debriefing (Bisson, Jenkins, Alexander, & Bannister, 1997; Cuijpers, Van Straten, & Smit, 2005; Hobbs, Mayou, Harrison, & Worlock, 1996), suggesting the need for further research and cautious application of this approach.

7.3. Resiliency training

"Defender's Edge" represents another preventive intervention that was designed for active duty Air Force Security Forces (Bryan & Morrow, 2011). The program emphasizes resiliency and reframes combat as "an athletic event requiring high levels of physical and mental fitness and endurance (pg. 18)." Skills training is conducted in five 30-minute modules occurring during battle drills, training, and actual missions. The modules consist of "Fatigue Countermeasures" (e.g., sleep hygiene), "Adrenaline Management," (e.g., stress management), "Mission Focus" (e.g., cognitive restructuring, goal-setting), "Killing," (e.g., trauma prevention, grief), and "Mind Tactics" (e.g., social support, distress tolerance). Skills were presented as necessary for "optimal combat performance." The facilitator, a clinical psychologist, participated in the full spectrum of unit activities. This allowed the psychologist to develop a shared experience with service members, to reduce the perception that mental health is disconnected from the unit, and to deliver immediate consultation on a range of health issues. Clinical services were provided in the medical officer's exam office to reduce the stigma of entering the mental health setting. The authors reported that among a squadron of 192 Air Force Security Forces deployed to Iraq, service members found the intervention to be helpful and trustworthy. Unfortunately, no information was provided on the extent to which the training reduced different mental health symptoms.

A similar preventive intervention, Comprehensive Soldier Fitness, focuses on developing psychological resilience and is currently being implemented Army-wide. One component involves training NCOs to be Master Resilience trainers (Reivich, Seligman, & McBride, 2011). As part of this training, service members learn how to develop self-awareness, self-regulation skills, cognitive restructuring skills ("building mental toughness"), and interpersonal/communication skills. Although the intervention is currently in the process of being evaluated, findings have not been published.

Another resiliency-based preventive intervention called "Life Guard: Bringing New Life to the Guard," was based on the principles of Acceptance and Commitment Therapy (ACT; Blevins, Roca, & Spencer, 2011). ACT is a third wave behavior therapy designed to increase acceptance of private experiences (e.g., emotions, thoughts, sensations), increase distance from maladaptive thoughts, and encourage engagement in activities consistent with personal values (Hayes, 2004). In a study of Life Guard, 144 National Guard service members completed a two-hour interactive workshop that was designed to promote resiliency and post-deployment reintegration. The program focused on providing skills a service member could

use to assist fellow service members, thereby reducing the stigma associated with acknowledging the need for personal assistance. The training was administered by a team that included a nurse, a social worker, a psychologist, and a recreational therapist. It incorporated three skill sets: a) Awareness (recognizing the relationship between person and private experience), b) Acceptance (nonjudgmental acceptance of private events, such as distressing memories), and c) Value-Based Living (living in a goal-directed manner). Life Guard was presented in a fashion amenable to the military setting (i.e., densely packed schedules with few times when soldiers are in one location for treatment). Therefore, it was implemented when soldiers were assembled for drills and was condensed into a brief workshop. To increase engagement, PowerPoint presentations were avoided and interactive exercises were emphasized.

In comparison to a delayed intervention control group, intervention participants reported fewer symptoms of depression and greater relationship satisfaction. On the other hand, groups did not differ on PTSD symptoms, substance abuse, and overall mental health functioning. A limitation of this study is that participants were not randomized to condition, and there were differences between groups on variables such as combat exposure, injury, and PTSD. Further research is needed using randomized designs, comparing Life Guard to standard ACT protocols, and conducting long-term follow-up to determine whether such brief interventions can prevent development of mental health symptoms.

In general, the increased use of brief/early interventions such as CSC, Battlemind, Defender's Edge, Comprehensive Soldier Fitness, and Life Guard may help reduce stigma towards mental health problems and treatments, and serve as a "gateway" for seeking more intensive psychotherapy. For example, the study of Defender's Edge reported that 20% of participants voluntarily initiated contact with the integrated psychologist, which sometimes resulted in completion of a course of psychotherapy (Bryan & Morrow, 2011). These interventions also offer an opportunity to focus on early symptom management and arousal reduction, which can increase the effectiveness of later interventions. Furthermore, Battlemind specifically addresses the importance of not letting stigma deter a service member from getting the mental health treatment he or she needs.

8. Adaptations of mental health interventions that may address barriers to care

In addition to early and preventive interventions, several formal mental health treatments have been adapted to address barriers to care in the military context. The interventions that have garnered the most support for treating veterans are grounded in the cognitive–behavioral therapy (CBT) framework. These interventions tend to focus on altering maladaptive thought patterns and behaviors in order to alleviate psychological symptoms. The CBT interventions that have received the most empirical support for the treatment of trauma-related disorders among veterans are Prolonged Exposure therapy (PE) and Cognitive Processing Therapy (CPT) (VA/DoD, 2010). PE involves repeated exposure to traumatic memories and trauma-related cues (Foa & Kozak, 1986). It also incorporates psychoeducation (i.e., common reactions to trauma) and breathing retraining techniques. CPT involves exposure therapy via written narratives of traumatic memories, coupled with modifying "stuck points" or maladaptive beliefs that emerge from the narratives (Resick & Schnicke, 1992). These interventions generally involve 10–20 individual therapy sessions (50–90 min) and are administered by behavioral health professionals. Both PE and CPT have been chosen for widespread dissemination in the Veterans Affairs (VA) healthcare system.

PE, CPT, and other interventions have been adapted in several ways to address the needs of active duty service members and returning veterans. In the following section, we describe these treatment adaptations, how they address barriers to care, and the results

of treatment-outcome studies for these adapted interventions. Treatment adaptations have included: changing service delivery formats, addressing negative beliefs about mental health treatment and symptoms, and tailoring components for military-specific issues. Table 1 summarizes treatment adaptations, barriers/facilitators addressed, and outcomes for studies that included active duty or OEF/OIF veterans.

8.1. Changing service delivery formats

8.1.1. Brief Interventions that are integrated into military and medical settings

A few abbreviated versions of PE and CPT protocols have been evaluated. The use of abbreviated versions of mental health treatment protocols helps address the demands of a deployment environment that involves long work hours, unpredictable schedules, and frequent changes in location. In addition to brevity, interventions need to be flexible to adapt to the changing military environment. For example, treatment may need to be implemented on an altered schedule or in changing locations, including outside of the clinic. Researchers have recommended the use of ongoing needs assessments to assess changing cognitive, physiological, and emotional stresses that vary with the changing demands of the military environment (Reger & Moore, 2006).

These brief, flexible interventions frequently involve integration of mental health providers into military and primary care settings. This change in service delivery format could improve treatment in the following ways: a) reduce stigma, b) reduce the perception of clinicians as "outsiders," c) provide more opportunities for soldiers to interact with service providers, d) educate providers on military culture and duties, e) allow service providers to collaborate with leaders and other professionals, f) encourage mental health and primary care providers to address the comorbid psychological and medical problems that are frequently observed in OEF/OIF veterans (Batten & Pollack, 2008), and f) allow clinicians to incorporate the military environment into exposure exercises (e.g., tactical training and drills allow for safe in vivo exposure; Hoyt & Candy, 2011).

In one of two small studies of abbreviated, combined PE/CPT protocols, 15 active duty OEF/OIF veterans received combined PE and CPT in four to six 30 minute appointments (Cigrang et al., 2011). This intervention employed the Primary Care Behavioral Health model/ Behavioral Health Consultation (BHC) model, wherein psychologists were embedded in the primary care setting and served as behavioral health consultants to medical providers. Participants met with behavioral health consultants in the primary care setting biweekly, completed a detailed narrative of the most distressing deployment event, re-evaluated problematic beliefs, and completed in vivo exposure activities. If symptoms were not alleviated by the conclusion of treatment, participants could be referred to specialty mental health care. Treatment completers ($n = 10$) improved on PTSD severity, depression, and global mental health functioning. Fifty percent of treatment completers did not meet criteria for PTSD at one month follow-up. Although the dropout rate was higher than civilian PE studies, it was comparable to studies with veterans (e.g., Schnurr et al., 2007). The average pre-follow-up effect size was moderate ($d = .43$), but smaller than the average pre-post effect size for a randomized trial of 65 OEF/OIF veterans who received the standard version of PE in a VA medical center ($d = 1.66$; Tuerk et al., 2011).

In a second pilot study of a brief, combined PE and CPT intervention for active duty personnel, Steenkamp et al. (2011) reported significant reductions in PTSD symptoms in a sample of 8 Marines. The intervention was conducted in garrison via six 90 minute individual therapy sessions. Effect sizes were large and comparable to the full PE intervention (Tuerk et al., 2011). Both of these studies were limited by small samples and lack of a control group.

A third study examined an abbreviated version of CPT within a sample of 19 active duty service members (Corso et al., 2009). This treatment also implemented the BHC model, delivering five 30 minute sessions in a family medicine clinic. Other adaptations included providing information on post-deployment reintegration techniques and modifying terminology to be military-specific. Two brief versions of CPT were implemented: a) writing exposure alone, and b) impact statement alone (i.e., identifying and modifying problematic cognitions). These interventions were compared to each other and to a treatment as usual condition. The impact statement condition was the only condition to exhibit significant pre-post improvement on PTSD and global mental health, with a large average effect size ($d = 1.47$). Participants in the writing exposure condition reported worse global mental health, which the authors suggest could be due to difficulty implementing exposure therapy in a brief format. This study was limited by a small sample size, high attrition, and a lack of random assignment.

In addition to the adaptations illustrated in the above studies, researchers have described other ways that clinicians have been integrated into the military context. In some cases, uniformed behavioral health providers are used to reduce stigma (Potter et al., 2009). Clinicians can also collaborate with military professionals to improve treatment efficacy by assisting leaders in recognizing the importance of implementing empirically supported treatments (Karlin et al., 2010). Providers may assist commanders in encouraging the receipt of appropriate mental health treatment among unit members. Communication with leaders can additionally reduce the number of occasions where soldiers are unnecessarily removed from their job duties due to misunderstandings about mental illness (Reger & Moore, 2006). Furthermore, clinicians can coordinate with leaders to allow soldiers to practice therapy tasks when they are not able to attend weekly treatment sessions (e.g., practice exposure exercises while in the field; Hoyt & Candy, 2011). In order to facilitate integration into military settings, mental health providers could receive education on military culture, including acronyms, the importance of rank, and the significance of stigma. It may be helpful for clinicians to perform role plays or analyze military case studies as part of this process (Reger & Moore, 2006).

8.1.2. Use of technology

Another way the service delivery format can be altered for the military context is through the adoption of technological advances. This includes the use of virtual reality devices and delivery of mental health treatment via telehealth (i.e., via telephone, Internet, or videoconferencing). Such advancements are expected to reduce the stigma associated with attending sessions in a mental health clinic and to increase willingness to engage in treatment. These advancements may also improve access to care, since they can introduce more flexibility into treatment timeframes and locations, and can even be more affordable (e.g., Internet-based self-help).

8.1.2.1. Virtual reality. Virtual reality exposure therapy (VRE) involves retelling traumatic memories in detail while immersed in a three-dimensional virtual environment that is customized to resemble aspects of the patient's traumatic event. VRE could be useful in reducing the stigma associated with mental health treatment among military personnel, since it does not involve traditional talk therapy. It may also be more approachable for young service members who are experienced with using technology to solve daily problems. Finally, VRE represents a more interactive and engaging treatment format that can address barriers to treatment engagement, such as emotional detachment (Reger & Gahm, 2008).

One study examined the efficacy of 3–12 sessions of VRE when conducted with 24 active duty OEF/OIF soldiers (Reger et al., 2011). The intervention resulted in an overall significant reduction in PTSD symptoms, with 62% of participants reporting a clinically significant change post-treatment. The effect size ($d = 1.17$) was large, although

somewhat smaller than traditional PE delivered to OEF/OIF veterans at a VA medical center ($d = 1.66$; Tuerk et al., 2011). Although the Reger et al. (2011) study was limited by lack of a control group, a second study addressed this weakness in the literature by assigning 20 active duty OEF/OIF veterans seeking treatment in naval medical centers to VRE and treatment as usual conditions (McLay et al., 2011). The researchers employed a version of VRE that included up to 10 sessions of graded exposure, physiologic monitoring, and anxiety management skills training. The researchers hypothesized that these treatment alterations allowed soldiers to recognize and control excessive autonomic arousal and cognitive reactivity, facilitating engagement in therapy. The VRE group improved significantly on PTSD symptoms in comparison to the treatment as usual group, and the effect size was large ($d = 1.29$). One limitation of this study is that the treatment as usual condition consisted of a variety of treatment approaches, making it difficult to draw conclusions regarding the efficacy of VRE in comparison to other specific treatments.

8.1.2.2. Telehealth. Telehealth service delivery represents yet another use of technology to adapt interventions for populations who are difficult to access. Therefore, it may help address barriers such as changing duty locations and lack of access to behavioral healthcare providers. A pilot study of 12 OEF/OIF veterans who received PE via telehealth demonstrated PTSD and depression symptom reduction that was smaller but comparable to a comparison group of 35 veterans who received in-person PE (Tuerk, Yoder, Ruggiero, Gros, & Acierno, 2010). Although the study lacked follow-up data and relied on a small sample, pre-post effect sizes were large. A second study randomized 47 primarily OEF/OIF combat veterans to home-based telehealth versus in-person treatment involving 8 individual sessions of PE and behavioral activation. Both conditions resulted in significant reductions in PTSD and depression symptoms (Strachan, Gros, Ruggiero, Lejuez, & Acierno, 2011). Effect sizes were moderate, and telehealth treatment did not significantly differ from in-person treatment.

A third study by Litz, Engel, Bryant, and Papa (2007) included 45 service members with PTSD as a result of attacks on the Pentagon on September 11th or due to combat in Iraq/Afghanistan. Participants were randomly assigned to receive either self-management CBT or supportive counseling, both administered via Internet. Results indicated that both groups improved on mean PTSD ratings, with the self-management completers reporting significantly fewer depression, anxiety, and PTSD symptoms at 6 month follow-up. One drawback of self-management was that participants were less likely to complete treatment (in comparison to supportive counseling). Because more symptomatic participants were less likely to be located at follow-up, it was difficult to fully evaluate the impact of the intervention.

A fourth study delivered group CPT to 13 veterans (38% OEF/OIF) via video teleconferencing techniques (Morland, Hynes, Mackintosh, Resick, & Chard, 2011). CPT was further modified in this study to exclude the written exposure component, and was delivered twice weekly in 12, 90 minute sessions. Participants were randomized to in-person group therapy or videoconference group therapy. Both groups showed significant reductions in PTSD. No difference between groups was found, suggesting that telehealth service delivery was comparable to in-person treatment. Veterans also indicated high levels of acceptance and satisfaction with the videoconferencing modality.

In conclusion, a growing body of research is demonstrating that technology-based interventions are similarly efficacious to in-person interventions. In addition to the adaptations described above, technology can be used to assist in completing therapy assignments when a soldier is unable to attend regular sessions. For example, imaginal exposure exercises can be recorded on an MP3 player and repeated outside of session. Although no studies have evaluated the impact of technology-based interventions on stigma or service use, one study found that a majority of soldiers would be willing to use a technology-based approach. Furthermore, 33% of soldiers who were not willing to talk to a counselor in person were willing to utilize a technology-based approach (Wilson, Onorati, Mishkind, Reger, & Gahm, 2008).

8.2. Group formats

A final way to adapt service delivery formats is to employ group therapy as opposed to individual therapy. Group therapy allows providers to increase access to care when resources are limited. Exposure to other group members can also help reduce stigma through normalizing reactions to stressors and providing social support (Foy et al., 2000). Therefore, group therapy formats may help to address barriers to care in the military setting. On the other hand, group therapy may be difficult to implement with active duty soldiers, particularly when the group is intended to be delivered in sequence and is not amenable to shifts in group membership. Furthermore, stigma and confidentiality concerns could discourage soldiers from engaging in treatments involving contact with fellow service members.

In one study of 104 male veterans (64% Vietnam era) in a PTSD Residential Rehabilitation Program, CPT delivered in a 14-session group setting resulted in more symptom reduction than treatment as usual (i.e., group interventions including some CBT elements). Language from the original treatment manual was modified to reflect combat experiences. Improvement was noted in PTSD symptoms, depression symptoms, psychological quality of life, coping, and psychological distress. In the CPT group, 16% of participants were classified as recovered and 41% were classified as improved (Alvarez et al., 2011). The average effect size was small ($d = .12$), and not as large as a study that employed the standard version of CPT at a VA medical center ($d = 1.24$; Monson et al., 2006). This may be due to the group therapy format, or to use of different assessment instruments. Strengths of this study included randomization to condition, use of valid and reliable assessment measures, and adequate sample sizes. Limitations included lack of long-term follow-up, therapist fidelity assessments, and comparison to specific efficacious treatments.

A second study evaluated an abbreviated version of Seeking Safety (SS), a cognitive-behavioral group intervention that integrates treatment for comorbid PTSD and substance use disorders (Najavits et al., 2008). The treatment focuses on interpersonal skills training, self-care, value-based decision-making, case management, coping with triggers, and emotion regulation. A pilot study with a 10 session version of SS was conducted with 14 OEF/OIF veterans attending a VA clinic (Norman, Wilkins, Tapert, Lang, & Najavits, 2010). Although the study reported a high drop-out rate (42%) and did not have a control group, completers were shown to have decreased PTSD, depression, and substance use symptoms. Due to the small sample size, statistical differences were not calculated, but the effect size for the treatment group was relatively large ($d = .76$). The authors noted the importance of addressing readjustment to civilian life and the need for social support from other veterans. They reported that veterans were more likely to engage in substance use treatment if they were first treated in a PTSD clinic and then referred to SS, or if they were allowed a few sessions to "try out" SS. They also noted that SS served as a gateway to more intensive treatment. Future studies need to employ RCTs with larger samples to establish the efficacy of SS with OEF/OIF service members, and to determine whether this intervention can be successfully adapted for active duty populations. In addition, the Norman et al. (2010) study suggests that further adaptations are needed to improve retention rates.

More research is needed to compare group therapy to individual therapy formats, with a particular focus on which approach can most effectively address barriers to care among military populations. Studies are also needed to determine whether group therapies can be effectively applied to active duty populations.

8.3. Addressing negative beliefs about mental health treatment

Several interventions have developed ways to frame techniques in less stigmatizing language, and to provide opportunities for service members to incorporate information that disconfirms their negative beliefs about mental health treatments and providers (i.e., Adler et al., 2009; Alvarez et al., 2011; Bryan & Morrow, 2011; Steenkamp et al., 2011). In the brief PE/CPT intervention described above, researchers avoided stigmatizing language by labeling the intervention as "Adaptive Disclosure" and "training" (Steenkamp et al., 2011). Researchers also avoided the use of the terms "PTSD," "patient," and "treatment." In other CPT interventions, language was modified to remove complex jargon and stigmatizing phrases such as "faulty thinking patterns" (Alvarez et al., 2011; Morland et al., 2011).

Several preventive and resiliency-based interventions worked to reframe perceptions of treatment and mental health symptoms. As discussed in the context of the Defender's Edge program, psychotherapy can be presented as a way to learn life skills that contribute to optimal combat performance. Behavioral health skills can be tied to pre-existing job skills sets, such as physical conditioning and survival training (Bryan & Morrow, 2011). Battlemind training reframed symptoms as common reactions to occupational stressors such as combat exposure (e.g., Adler et al., 2009). Information on the frequency of traumatic stress reactions following combat can also be provided to normalize these reactions. Finally, adversity can be presented as a necessary mechanism through which growth and development occurs (Bryan & Morrow, 2011).

The Battlemind intervention incorporated several of these elements, and was able to demonstrate decreased stigma among large group participants with high combat exposure (Adler et al., 2009). The group CPT study that used modified language (Alvarez et al., 2011) only demonstrated small treatment effects. Although the brief PE/CPT study used non-stigmatizing language and demonstrated large effects, it was limited by small sample size (Steenkamp et al., 2011). Defender's Edge incorporated many reframing elements, but was not evaluated in regards to symptom or stigma reduction (Bryan & Morrow, 2011). Therefore, future studies will need to determine whether these techniques decrease stigma and facilitate mental health treatment-seeking and recovery.

In addition to the treatment adaptations described above, education can be provided prior to initiating treatment to help dispel negative beliefs about treatment-seeking. Because Army behavioral health providers report that the majority of soldiers receive some form of CBT and/or evidence-based pharmacotherapy (Wilk et al., 2011), soldier education should specifically focus on dispelling misperceptions about these treatments. For example, it will be important to explain the rationale and typical techniques used in CBT approaches to help reduce concerns and questions about the efficacy, timeframe, and nature of these treatments. Furthermore, service members can be provided with information on common medications and their side effects, addressing concerns about their addictive qualities or likelihood of impairing job performance. They could also be provided with information about the negative consequences of not seeking treatment, and how treatment can ultimately decrease their risk of separation from the military (Hoyt & Candy, 2011).

8.4. Incorporating targeted components into mental health treatments

Another means of concentrating on issues specific to military service members is to incorporate targeted components into existing interventions. For example, both the military version of the Cognitive Processing Therapy manual (Resick, Monson, & Chard, 2007), and the brief PE/CPT intervention employed in the Steenkamp et al. (2011) pilot study, incorporated segments to address traumatic grief and survivor's guilt. The Defender's Edge and Battlemind interventions addressed military-specific issues such as readjustment to

civilian life. Interventions may also consider addressing other common issues for service members, including anger management, emotional engagement, and relational problems.

8.5. Relapse prevention

One treatment adaptation that has been recommended, but not evaluated, is incorporation of relapse prevention components. Soldiers who have experienced high combat exposure, such as those who have deployed to the OEF/OIF conflicts, are at risk for chronic PTSD and trauma-related mental health problems. Furthermore, many soldiers enter the military with risk factors for the development of mental illness. In addition, active duty members are frequently placed back in situations where they will encounter further trauma exposure. Therefore, relapse prevention is likely to be an important component of military-adapted interventions. For example, soldiers in treatment can be encouraged to develop plans and coping strategies for high-risk situations (e.g., using relaxation skills or seeking social support when experiencing symptoms of PTSD or depression). "Booster" sessions and continued access to a mental health professional can also be utilized (Creamer & Forbes, 2004).

9. Other interventions designed to facilitate mental health treatment-seeking

In this section we describe programs that are not typically categorized as mental health treatments or treatment adaptations, but are intended to facilitate mental health treatment-seeking and engagement. These include screening and early intervention programs, and programs that enlist leaders and unit members in stigma reduction and treatment referral. These programs and corresponding barriers that may be addressed are summarized in Table 1.

9.1. Screening and early identification

One recommendation for facilitating receipt of needed mental health treatment is to implement broad screening of all service members during and after deployment. These assessments can help identify at-risk individuals, with an emphasis on risk factors specific to the military setting (e.g., multiple trauma exposure, traumatic brain injury, poor social support). One study describes the use of such procedures at Madigan Army Medical Center at Joint Base Lewis-McChord (Hoyt & Candy, 2011). Soldiers are screened the first week after deployment as part of an Army-wide Soldier Readiness Program. Soldiers are required to screen for behavioral health issues and establish a plan before going on leave or being released from active duty. They are screened again between 90 and 180 days as part of the Army-wide Post-Deployment Health Re-Assessment (PDHRA). At Madigan, soldiers receive face-to-face contact with a behavioral health provider to reduce stigma and barriers such as not knowing where to get care or schedule an appointment, as well as lack of trust in mental health providers. Clinicians also provide psychoeducation regarding mental health issues and use motivational interviewing to discourage minimization of mental health symptoms. For those who do not seek treatment on their own, uniformed providers are assigned to command consultation positions, and they field calls from concerned commanders regarding soldiers with problematic behaviors. These soldiers can then be referred for intervention.

Other programs, such as RESPECT-Mil, institute screening and referral for mental health problems in primary care settings, which represents another non-stigmatizing means of accessing large groups of soldiers (Engel et al., 2008). This requires education of primary care providers on mental health issues and referral resources. In the RESPECT-Mil program, a nurse care facilitator also ensures continuity of care by assisting with follow-up appointments, symptom monitoring, and enhancing the interface with mental health services. Although broad screening and referral procedures

are designed to facilitate treatment-seeking, their effect on mental health service use remains to be evaluated.

9.2. Enlisting fellow unit members to assist service members in need of treatment

A few interventions entail active involvement of the service member's unit in implementing measures to address mental health problems and facilitate further treatment seeking. Unit Watch is an intervention in which, following recommendations of a clinician, the soldier's command team works to prevent suicidal and homicidal behavior by searching the soldier's belongings and removing dangerous items, prohibiting access to alcohol and drugs, continuously observing the soldier, and ensuring that the soldier returns to treatment (Payne, Hill, & Johnson, 2008). Although this intervention has not been evaluated, the intent is to maintain the soldier in his/her unit and reduce the likelihood of psychiatric hospitalization, which is associated with a high degree of stigma.

Another example of how military members can be enlisted to reduce stigma and assist fellow soldiers with mental health needs is through the Buddy-to-Buddy program. This program involves having trained soldiers regularly check in with peers who have returned from combat, assess their mental health needs, and connect them with needed resources (Greden et al., 2010). One study reported that over 20% of participating soldiers were referred to formal treatment by their Buddy (Greden et al., 2010).

10. Conclusions and future directions

Current military service members are the recipients of a high degree of combat exposure, resulting in a host of mental health problems. Despite high rates of these problems, treatment-seeking is relatively low. Barriers include stigma, logistical difficulties, negative perceptions of mental health treatment and its consequences, and military values such as the need to maintain mental toughness. In addition to barriers to treatment-seeking, there are several barriers to effectively implementing mental health interventions with service members (e.g., difficulty with emotional engagement). However, the prevalence of these barriers and their relation to treatment outcomes are poorly understood. In addition to identifying the roles of these barriers, interventions are needed to reduce barriers and facilitate treatment-seeking among military personnel who could benefit from mental health treatment. These might include large group workshops that are primarily focused on stigma reduction, changing attitudes towards mental health treatment, providing information about mental health treatment, enlisting peer support, screening for mental health symptoms, and connecting at-risk military personnel with service providers. Policy changes may also be needed to: a) increase access to providers and behavioral health facilities, b) reduce concerns regarding confidentiality, c) increase unit cohesion and support for treatment-seeking, and d) mitigate the effects of mental health treatment-seeking on career trajectories.

Several brief, early and preventive interventions have been developed that can address barriers to care such as stigma, job duty interference, negative attitudes towards mental health treatment, and poor symptom recognition. More research is needed to determine whether these interventions reduce barriers to care and prevent development of severe symptoms. Multiple adaptations of formal mental health treatments have also sought to address barriers to treatment-seeking and engagement. These adaptations include incorporating flexibility and technology into the typical service delivery formats, abbreviating standard treatment protocols, integrating clinicians into the military and primary care contexts, providing treatments in group formats, providing psychoeducation and reframing perceptions, and including targeted components. Virtual reality and telehealth-based interventions are the only treatment adaptations

that have been evaluated against control groups. Support for their efficacy was found, suggesting that these interventions possess promise for overcoming barriers such as stigma, engagement, and access to care. Finally, interventions that involve widespread screening and increasing peer support can potentially improve early symptom recognition and facilitate receipt of needed treatment. Again, these interventions require further evaluation to establish their utility.

In conclusion, continued research is needed in multiple areas, particularly regarding mental health interventions and their adaptations to the military context. First, randomized controlled trials that compare adapted interventions to standard protocols are required. Research is also needed to determine whether adaptations to existing treatments will improve their efficacy and reduce barriers to care in active duty settings. Furthermore, several empirically supported treatments exist for trauma-related problems within the civilian population, but have not been applied to OEF/OIF or active duty populations. These treatments include the full version of ACT (Hayes, 2004), motivational interviewing for substance use disorders (Miller & Rollnick, 2002), behavioral activation for depression (Lewinsohn, 1975), Dialectical Behavior Therapy (Linehan, 1993), and Couples Therapy. Another set of interventions that have established efficacy for the treatment of trauma-related disorders in veterans, but not active duty soldiers, are pharmacological treatments. In general, the availability of pharmacotherapy can help reduce barriers to care because it requires less contact with a mental health professional. However, the fact that soldiers often harbor concerns about medication side effects (Britt et al., 2011) and the efficacy of pharmacotherapy implies the need for increased education on these interventions for military personnel. In order to address the methodological weaknesses of the extant research, future studies should include a) larger samples that are more representative of the military population, b) randomized intervention conditions, c) treatment fidelity assessments, d) control for co-occurring pharmacological treatment effects, and e) long-term follow-up. Researchers will also need to develop ways to address challenges to data collection with active duty samples, including difficulties with treatment engagement, retention, and follow-up.

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